

The influence of emojis and digital text on language development in children

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Abstract

The study explores the significant influence of emojis and digital text on language development in children. It highlights how these multimodal tools alter communication methods, particularly in terms of vocabulary acquisition, syntactic construction, and the use of metalanguage. Emojis serve as visual cues that enrich discourse coherence and facilitate the expression of emotional nuances, while also prompting children to adapt their communication according to digital contexts. The research employs a mixed-methods approach, combining qualitative observations and quantitative assessments to analysed interactions among children aged 4 to 8 years. Key findings indicate that while emojis enhance understanding and engagement, they may also lead to simplified language structures, raising concerns about linguistic precision. The study emphasizes the importance of contextual factors, such as age and the family environment, in moderating these effects. It concludes by advocating for balanced educational strategies that integrate digital tools without compromising traditional language mastery, ensuring harmonious language development in an increasingly digital world.

Keywords Emojis, Digital Text, Language Development, Pragmatics, Syntactic Structures.

Résumé

L'étude explore l'influence significative des émojis et du texte numérique sur le développement du langage chez les enfants. Elle met en évidence comment ces outils multimodaux modifient les méthodes de communication, en particulier en ce qui concerne l'acquisition du vocabulaire, la construction syntaxique et l'utilisation du métalangage. Les émojis servent de repères visuels qui enrichissent la cohérence du discours et facilitent l'expression des nuances émotionnelles, tout en incitant les enfants à adapter leur communication en fonction des contextes numériques. La recherche utilise une approche mixte, combinant des observations qualitatives et des évaluations quantitatives pour analyser les interactions entre des enfants âgés de 4 à 8 ans. Les résultats clés indiquent que, bien que les émojis améliorent la compréhension et l'engagement, ils peuvent également conduire à des structures linguistiques simplifiées, soulevant des préoccupations concernant la précision linguistique. L'étude souligne l'importance des facteurs contextuels, tels que l'âge et l'environnement familial, dans la modulation de ces effets. Elle conclut en plaidant pour des stratégies éducatives équilibrées qui intègrent les outils numériques sans compromettre la

maîtrise du langage traditionnel, garantissant ainsi un développement langagier harmonieux dans un monde de plus en plus numérique.

Mots-clés

Émojis, Texte Numérique, Développement du Langage, Pragmatique, Structures Syntaxiques

1.Introduction

The rapid evolution of digital technologies has profoundly transformed communication methods, particularly among young users. The increasing use of emojis and digital texts in daily interactions raises crucial questions about their impact on language acquisition and development in children. These multimodal tools introduce new forms of expression, blending visual and textual elements, which modify the very structure of written discourse. The visual simplicity of emojis allows for immediate communication rich in emotional nuances, often used to compensate for limited verbalization at certain stages of development. However, this integration can also lead to changes in vocabulary mastery, syntactic construction, and metalanguage, requiring precise analysis to understand their long-term effects. Furthermore, digital textuality promotes the development of pragmatic skills, such as discourse coherence and the manipulation of discourse markers, while being subject to specific social and cultural influences. Understanding these phenomena demands a multidisciplinary approach that considers not only the linguistic dimension but also the family and educational contexts that shape interaction with these new forms of exchange. Thus, it becomes essential to study these mechanisms to develop suitable pedagogical strategies aimed at preserving the richness of language while leveraging the advantages offered by digital technologies. The complexity of these dynamic underscores the need for in-depth investigations into how these tools modulate language development and, ultimately, the communicational identity of future generations.

2 Theoretical Framework

The theoretical framework of this study is based on a comprehensive understanding of emojis as visual elements integrated into digital text. These pictograms, now ubiquitous in electronic communications, are analyzed according to their typology (evocative, expressive, symbolic emojis) as well as their communicative and cognitive functions. Their ability to convey emotions, modulate tone, and enhance discourse coherence is essential for understanding their role in language development. Furthermore, the study considers the intrinsic characteristics of digital text, including its multimodal nature, information density, and speed of exchange, as well as their influence on the linguistic level. The fragmentation of discourse and the frequent use of abbreviations or symbols, such as emojis, foster simplified yet innovative forms of expression that may impact the acquisition of traditional linguistic skills. The literature shows that these digital media, by integrating different modalities (visual, textual, symbolic), modify the way children construct their linguistic representations and promote certain stages of development while hindering others. By studying these dynamics, the theoretical framework highlights the complex interactions between the digital environment, visual tools, and their

influence on the evolutionary trajectory of language, emphasizing the need for a multidimensional approach to understand long-term effects.

2.1. Definition and Typology of Emojis

Emojis, graphic pictographic forms used in digital communication, constitute a varied typology that reflects the diversity of emotional and conceptual expressions conveyed online. Several categories of emojis can be distinguished: those representing emotions (smiles, sadness, anger), symbols (arrows, stars, hearts), as well as objects and animals, which enrich the tone and nuance of the message. Their classification also depends on their functional usage, whether indicating a mood, emphasizing an intention, or contextualizing communication. This diversity allows users, particularly children in the linguistic development phase, to draw upon a broader range of graphic representations to express ideas, affective states, and intentions in a concise and visually immediate manner. The typology of emojis is constantly evolving with the emergence of new symbols, influenced by cultural, technological, and social trends. They occupy a central place in digital interaction as non-verbal vectors, facilitating interpretation and engagement in written exchanges. Their integration into digital texts alters the communicational dynamic by offering alternative means of expression, but it also raises questions about their potential impact on language acquisition and structuring in younger users. Thus, the diversity and typology of emojis illustrate their ability to enrich digital discourse while constituting a privileged area of study to understand their influence on children's linguistic development.

2.2. Characteristics of Digital Text and Linguistic Level

The characteristics of digital text play a major role in the structuring and evolution of language in children. Unlike traditional writing, digital text combines multiple forms of symbols, including letters, numbers, punctuation marks, as well as non-textual elements like emojis and icons. These elements introduce new modalities of expression that, while enriching communication, also impose specific constraints on language development at different stages.

At the first level, the child must master the alphabet and recognize symbols, a fundamental step to achieving fluent reading. Next, understanding and producing texts involves familiarizing oneself with syntax, grammar, and vocabulary, whether in writing or speaking. However, the digital context poses particular challenges: information density, speed of communication, and the presence of visual or symbolic elements, such as emojis, influence these processes.

Emojis, by their iconic nature, represent an additional dimension of written communication, allowing for the expression of emotions, nuances, or implicit comments. Their use promotes the learning of a visual metalanguage and facilitates metacommunication. Yet, their systematic use can also modify the progression of classic syntactic structures by fostering dependence on more simplified or informal forms. Thus, while these symbols enrich the ability to express complex concepts concisely, they can also orient development toward a more intuitive use, sometimes at the expense of linguistic precision.

Digital text, by its dynamic and interactive nature, engages the child in writing that is often intended to be immediate, multimodal, and contextually flexible. The constant manipulation

of these characters and symbols requires the ability to synthesize information, to exercise discernment in the face of a diversity of visual resources, and to develop a linguistic awareness suited to this environment. At each stage of development, mastery of these various elements, while maintaining a balance with knowledge of traditional rules, is essential to ensure coherent and comprehensive linguistic Learning

2.3. Themes of Language Development in Children

The themes of language development in children encompass several essential dimensions for understanding the acquisition and evolution of linguistic skills during childhood. Among these, the diversity of oral and written skills constitutes a fundamental foundation, allowing the child to adapt to social and educational demands. Mastery of vocabulary plays a central role, as it directly influences the ability to express ideas, understand others, and enrich discourse. Furthermore, syntactic development, involving the construction of coherent sentences and mastery of grammatical structures, progressively evolves with age and linguistic experience. The ability to use metalanguage, that is, to talk about language itself, fosters better phonological, morphological, and syntactic awareness, which is essential for learning to read and write. Social interaction, through oral or written communication, is also a determining factor, strengthening the pragmatics of language, particularly the ability to adapt one's discourse to the situation, the interlocutors, and to respect social communication norms. Finally, awareness of metacommunication, that is, understanding non-verbal cues and discourse strategies, allows the child to interpret and produce more nuanced messages. These themes of development are interdependent and evolving, shaped by family and school environments, as well as exposure to current digital issues that gradually restructure the linguistic landscape of young users.

3. Methodology

This study is based on a rigorous methodology aimed at analyzing the impact of emojis and digital text on the language development of children. The study design was developed using a mixed-methods approach, combining quantitative and qualitative methods to collect rich and varied data. A qualitative component allowed for the observation and interpretation of the nature of linguistic interactions in various digital contexts, while the quantitative component provided precise evaluation of vocabulary, syntax, and discourse skills evolution.

The instruments used include video recordings, transcripts of digital conversations, and questionnaires specifically developed for this research. Data collection also relies on the analysis of corpora of text exchanges from messaging apps, social media, and educational platforms. Moreover, computer-assisted linguistic analysis tools were employed, allowing for the evaluation of morphosyntactic characteristics, lexical diversity, and grammatical complexity of the children's productions.

Sampling was conducted according to a stratified protocol, including children aged 4 to 8 years, selected based on specific criteria such as family and educational context, level of exposure to digital tools, and frequency of emoji use. The procedure integrated a direct observation step, complemented by interviews with parents and teachers to contextualize the

collected data. The duration of the study was planned over several months to observe temporal developments in language development within varied environments.

This methodological framework provides the research with a solid foundation to precisely capture how the use of emojis and digital text influences both vocabulary mastery, syntactic construction, and the implementation of metalanguages in young children, while taking into account modulatory factors related to age, family context, and frequency of engagement with these new supports.

3.1. Study Design

The study design is based on an empirical approach aimed at analyzing the impact of emojis and digital text on the linguistic development of children. Its methodological framework relies on the selection of representative samples, including different age groups to capture the evolving dynamics of language in response to the increasing integration of digital tools. The research adopts a longitudinal approach to track the evolution of language skills over a specified period, thereby allowing for the observation of potential influences of digital media over time.

The study consists of several phases. The first phase is exploratory, involving qualitative surveys, including interviews with children, their parents, and their teachers, to understand their daily use of emojis and digital text. The second phase employs quantitative measures through standardized language tests, complemented by the analysis of written productions from school and family activities. These productions are meticulously analyzed to identify variations in vocabulary, syntax, and metalanguage.

An essential dimension of the design concerns the use of various platforms, such as messaging apps and social media, to capture the diversity of usage contexts. The selection of analysis tools is based on methodological triangulation, combining direct observation, linguistic assessment grids, and statistical processing to ensure the reliability and validity of the results. Finally, the study incorporates a qualitative analysis step to interpret the data while considering socio-cultural context, individual factors, and environmental variables. This rigorous methodological framework aims to illuminate precisely and nuancedly the impact of digital text and emojis on the acquisition and organization of language in children.

3.2. Instruments and Measures

In the context of this study, the instruments and measures used have been specifically selected to allow for an accurate assessment of the effects of digital text and emojis on children's language development. Data collection relied on a combination of quantitative and qualitative methods to obtain a comprehensive overview of the linguistic skills in question. Among the tools used are standardized tests assessing vocabulary, syntax, and metalanguage abilities, adapted to different ages and stages of development. These tests were administered using interactive software that allows for precise recording of responses, thus facilitating a detailed analysis of progress and potential gaps.

Additionally, observation grids were designed to capture how children spontaneously use emojis in their digital written productions. These grids allow for a qualitative analysis of the phenomenon, particularly by identifying the syntactic or pragmatic functions that these emojis assume within children's discourse. Questionnaires aimed at teachers and parents were also

deployed to gather their perceptions of the impact of digital text use on language acquisition. Finally, automatic analyses of corpora derived from texts produced by children were conducted using specialized natural language processing software, allowing for the evaluation of frequency, lexical diversity, and syntactic complexity of the productions.

All of these instruments were validated by a committee of experts in linguistics and developmental psychology, ensuring their reliability and contextual relevance. The triangulation of methods reinforced the robustness of the results, offering a nuanced view of the interactions between digital text, emojis, and the evolution of language in young users. In summary, this rigorous methodological approach forms the basis for an in-depth analysis, allowing for differentiation between the potentially beneficial or disruptive effects of these contemporary tools on linguistic development.

3.3. Sampling and Procedures

The sampling for this study was designed to ensure a balanced representation of the diversity of linguistic and demographic profiles of children. A sample of forty children, evenly distributed between the age groups of 4 to 6 years, was selected based on specific stratification criteria. The selection took place in public primary schools located in urban and rural areas, allowing for a significant contextual variety. To ensure representativeness, the approach favored random recruitment from school enrollment lists, while respecting ethical parameters and informed consent.

The experimental procedures consisted of several phases. Initially, the children were observed in their natural setting through structured play sessions, during which their interaction with various digital tools, including emojis and texts, was documented. Subsequently, data collection was carried out through guided activities, where each participant responded to written and oral exercises designed to assess their mastery of emerging digital language. Data acquisition was conducted by researchers trained in communication with children, utilizing both audiovisual recordings and written materials.

The protocols were validated by an ethics committee dedicated to research involving minors, ensuring respect for the confidentiality and well-being of participants. Data collection took place over a three-month period, allowing for the establishment of a sufficient corpus for analysis. The procedure also included an interview component with teachers and parents to obtain additional qualitative context regarding children's exposure to digital texts in their family and school environments. These elements allowed for the establishment of relevant correlations between the diversity of the sample and the potential impact of emojis on language development, while ensuring the reliability and robustness of the obtained results.

4. Influence of Emojis on Vocabulary and Syntax

The increasing use of emojis in digital exchanges profoundly influences vocabulary structuring and syntactic construction in children. These graphic symbols, designed to express emotions, attitudes, or objects, quickly become integrated into children's discourse, altering both lexical richness and modes of formulation. The regular introduction of emojis in messages promotes the development of a more visual and concrete lexicon, where words are complemented or replaced by pictorial representations, facilitating understanding and

memorization. However, this trend may also limit the acquisition of abstract or specialized terms, favoring simplistic or even stereotyped representations.

On a syntactic level, their use influences sentence construction by introducing shorter forms, often fragmented or abbreviated, in response to a more informal and immediate mode of communication. This evolution may contribute to a simplification of syntactic structures, raising concerns about the gradual mastery of complex forms of written language.

Furthermore, the regular presence of emojis alters how children perceive the relationship between text and non-verbal cues, leading to a visual metalanguage that requires a new reading of the message. As development progresses, exposure to these symbols also leads to an adaptation of metalanguage, where emojis become metacommunicative tools used to express emotional nuances, reinforce intent, or clarify context. While these elements promote richer and more immediate communication, they may also contribute to a shortening of the linguistic acquisition process by encouraging more simplified and iconic forms. Thus, their impact on vocabulary and syntax is part of an evolving language process, where the complementarity between traditional written text and graphic symbols modifies how children construct, manipulate, and convey linguistic information.

4.1. Vocabulary Acquisition

Vocabulary acquisition in children evolves under the influence of linguistic interactions, whether oral or written, and is strongly modulated by exposure to digital media. Digital communication, enriched by the frequent use of emojis, offers an environment where young learners are quickly confronted with a varied vocabulary, often associated with pictographic representations. These visual elements, which accompany or sometimes replace words, help expand the child's lexical repertoire by allowing them to associate images with precise meanings, thus facilitating memorization and understanding.

Emojis, as iconic units, play a role in consolidating lexical structures by reinforcing connectivity between concepts and their graphic representations. Their frequent use in digital exchanges promotes a form of interactivity that stimulates linguistic interest and encourages the search for new terms to describe emotions, objects, or actions. Moreover, this modality fosters the emergence of a more expressive vocabulary, particularly in conveying feelings and contextual nuances that may be difficult to express solely through written text.

However, it is important to note that this dynamic may present challenges for the development of a rich and precise vocabulary. The predominance of emojis could, in some cases, limit lexical diversification by favoring simplified or visual expressions at the expense of a more elaborate lexicon. Additionally, the ambiguous or variable interpretation of iconic representations may lead to misunderstandings or gaps in acquiring precise vocabulary, especially if the child does not have suitable pedagogical support.

Thus, the integration of these tools into educational practices should be accompanied by a modulation approach to promote both vocabulary expansion and mastery of precision in communication. Reflecting on how digital text and emojis intervene in the linguistic acquisition process allows for a better understanding of the issues related to their use, particularly among young children in the linguistic development phase.

4.2. Sentence Construction and Syntactic Structures

Sentence construction and syntactic structures in children are profoundly impacted by the increasing use of digital text, particularly through the integration of emojis. In a digital context, familiarity with simplified linguistic forms, such as short sentences, elliptical statements, or the frequent use of symbols, tends to modulate how children construct their own statements. The presence of emojis, as graphic or iconic elements, influences the syntactic process by providing visual cues that facilitate understanding but may also encourage a certain degradation or simplification of complex structures.

Children tend to develop written language characterized by a reduction in syntactic complexity, favoring simple and direct constructions. For example, the repeated use of short affirmative sentences, concise interrogative forms, or decontextualized statements contributes to the standardization of syntactic structure, reinforcing a mode of expression that is more immediate and less elaborate. Furthermore, the omnipresence of emojis encourages the integration of more expressive and metaphorical structures, allowing children to enhance their ability to express nuances and emotions without always resorting to elaborate syntax. This digital context also influences the development of more advanced syntactic skills, such as the use of coherent sequences, coordination of clauses, or the use of subordinate clauses. For some children, increased attention to visual elements may lead to less stimulation toward mastering complex syntactic constructions, favoring a more visual and contextual language. However, there are also situations where regular exposure to these varied linguistic forms can enrich the child's syntactic flexibility by offering hybrid structures that blend classic sentences, idiomatic expressions, and iconic elements.

Ultimately, the impact of the digital environment on syntactic construction also depends on individual factors, such as age, level of linguistic development, as well as educational and familial context. Often, the collaborative and interactive aspect of digital communication fosters a better appropriation of diverse syntactic forms while posing the challenge of maintaining a balance between the use of simplified language and the progressive acquisition of more complex structures, which are essential for balanced linguistic mastery.

4.3. Metalanguage and Metacommunication

Metalanguage and metacommunication play a crucial role in understanding the issues related to the use of emojis and digital text in children's language development. These elements go beyond simple verbal expression to constitute reflective tools that allow for regulating, interpreting, and enriching communication. By integrating metalinguistic references, children learn to distinguish between the message content, its immediate meaning, and the nuances provided by non-verbal markers. Emojis, enriching digital text, act as metacommunicative cues that indicate the tone, attitude, or emotion associated with a message, thereby facilitating understanding in a context often devoid of intonation or body language.

Moreover, the ability to use precise metalanguage allows children to clarify their intentions, articulate their requests, or detect potential ambiguities in their digital exchanges. Mastery of these metalinguistic skills is essential for developing a more reflective and critical language in the face of digital media. It also fosters the construction of discourse better suited to varied

contexts, incorporating, for example, elements of code or conventions specific to online communication.

Furthermore, interactions regulated by metacommunication encourage the emergence of a dialogic context where children learn to adjust their messages according to their interlocutors, recognize discourse strategies, and position themselves regarding the implicit social norms in these exchanges. In summary, the development of metalinguistic skills in the digital context constitutes a key step for children to master not only the content of their discourse but also how they can and should engage in effectively interpreted exchanges.

5.Role of Digital Text in Pragmatics and Communication

Digital text exerts a significant influence on the pragmatics and communication of children, particularly by altering how they construct and interpret meaning in their daily exchanges. Emojis, used as discursive cues, enrich the coherence of discourse by providing contextual and emotional markers that facilitate message interpretation. Their use promotes understanding of communicative intentions, allowing for a more nuanced and less ambiguous reading of written interactions.

Moreover, pragmatics, which refers to the practical use of language in social situations, adapts to the demands of digital communication. Children learn to use these graphic elements to modulate their attitudes, signal nuances, or reinforce a statement. The presence of emojis also imposes a certain regulation of written expression, often in the form of social pressures aimed at maintaining rapid and expressive communication, sometimes at the expense of linguistic precision. Thus, children must develop the ability to calibrate their discourse according to the digital context, integrating these new elements into their communicative practices.

Digital text, through its characteristics, also promotes the acquisition of essential indexical skills for pragmatics: it requires reliance on shared knowledge and implicit conventions, enhancing the ability to read between the lines. Young users must navigate discourse where understanding no longer relies solely on lexical content but also on recognizing contextual signifiers, such as the appropriate or inappropriate use of emojis. Mastery of these elements becomes a crucial issue for developing effective communication adapted to the digital environment, where pragmatics plays a central role in interpreting and adjusting messages according to their social and interactive context.

5.1. Discourse Coherence and Indexicality

Discourse coherence is an essential foundation in constructing meaning within digital exchanges. It is defined by the ability to organize statements logically, coherently, and appropriately to the communicative context, thereby facilitating mutual understanding.

Indexicality, on the other hand, refers to the relationship between the language used and the specific context in which it is situated. In the context of digital interactions, these two concepts play a crucial role, particularly due to the fluidity and multimodality of exchanges.

The presence of emojis and abbreviated text elements imposes a more contextual and often more implicit reading of messages, where meaning resides not only in lexical content but also in the cues provided by these symbols. For example, a smiling emoji or a specific linguistic gesture can serve as a cue to modulate the interpretation of a sentence or to signal a particular

tone, thus avoiding potential misunderstandings. The ability to maintain discourse coherence in an environment characterized by speed and economy of words depends on mastering contextualization strategies and the relevant use of indexical elements. Consequently, linguistic development in children relies not only on lexical and syntactic acquisition but also on the ability to identify, interpret, and produce these contextual signals. Regular practice of these digital discursive forms thus contributes to structuring their understanding of communicational nuances while shaping their ability to engage in critical reading and appropriate production in multifaceted environments.

5.2. Use of Emojis as Discursive Cues

The use of emojis as discursive cues is an essential dimension in understanding and constructing meaning during digital exchanges. These pictograms, often perceived as unstructured graphic elements, actually play a key role in the contextual interpretation of messages, providing nuances that complement or modify textual content. By inserting themselves into written discourse, emojis indicate emotional states, communicative intentions, or underlying tones, activities that traditionally fall within the realm of pragmatics. For children, their use fosters recognition and understanding of discourse nuances while stimulating their ability to decode contextual cues, which constitutes a fundamental step in developing communication skills. The visual simplicity of these symbols also provides an immediate reference in the face of the growing complexity of contemporary written language. However, their use can also influence the cognitive construction of discourse by introducing symbolic markers derived from visual language, often complementing or substituting certain verbal elements. Mastery of these discursive indicators can thus encourage a more intuitive reading of exchanges while enriching understanding of conversational strategies in a digital environment. Furthermore, this dynamic could, in the long term, reshape certain aspects of linguistic development, particularly by modulating the reception of discourse coherence and enhancing the ability to perceive non-verbal cues in written communication. In summary, the use of emojis as discursive cues in digital text represents a notable paradigmatic evolution, integrating issues of understanding, pragmatics, and metacommunication, with significant implications for children's linguistic learning in an increasingly digitalized world.

5.3. Social Pressures and Regulation of Written Expression

Social pressures play a determining role in regulating written expression in a digital context for children. From a young age, children are subject to implicit and explicit norms that guide their communicative practices, particularly through the use of emojis and simplified writing forms. These norms, often conveyed by peers, family, or media, tend to value rapid, visual, and expressive communication, which influences how children construct and adapt their language. For example, the frequent use of emojis can become a form of conformity to the social codes of the group, promoting simplification of expression and prioritizing emotionality over linguistic precision.

Moreover, the regulation of written expression is also driven by social control mechanisms that seek to preserve coherence with cultural and educational expectations. Teachers and educators play an essential role in modulating these influences, considering the impact of digital tools while maintaining the goal of preserving mastery of written language.

Establishing pragmatic rules aimed at encouraging clear and structured writing, while accepting certain linguistic innovations related to emoji use, helps balance external pressures. Finally, these dynamics are not uniform: they vary according to age, socio-cultural environments, and the degree of exposure to digital media. Social pressure thus exerts both a positive influence, fostering richer and more expressive communication, and a negative one, risking limiting language complexity. The regulation of written expression in children thus becomes a major issue, requiring the mobilization of adapted educational strategies to support a balanced and critical use of these new linguistic tools.

6. Moderating Factors and Contextual Variables

Moderating factors and contextual variables play a determining role in how exposure to emojis and digital text influences children's language development. Age is a primary essential parameter, as critical periods of language development overlap with stages of cognitive and communicative growth. During the early years, when vocabulary and syntax acquisition is flourishing, early and frequent use of emojis can promote metaphorical and visual appropriation of language, while also presenting a risk of excessive simplification or degradation of complex syntactic structures if this exposure is not guided.

The family and educational environment is another key factor. The quality of interaction, the presence of adults capable of framing and contextualizing the use of digital tools influence how children interpret and integrate these elements into their language development. Careful guidance allows for transforming the use of emojis into an enriching support rather than a substitute for oral or written language, thus promoting harmonious progression. Conversely, an environment where the use of digital tools lacks guidance can encourage impulsive or decontextualized uses, thus limiting the educational potential of these tools.

The degree of exposure and the diversity of materials used by the child are also important moderating variables. Regular interaction with different types of digital texts, including long, short, mixed images and words, offers a variety of linguistic stimuli conducive to balanced language skill development. Moreover, the frequency of use and the richness of accessible content play a critical role: excessive consumption without educational support can lead to negative influences on language mastery, while moderate and diverse use can stimulate linguistic creativity and syntactic adaptability.

Finally, individual specificity, including developmental stage, motivation, or cognitive profile, acts as an additional modulator in this framework. Each child exhibits a particular sensitivity to these variables and their interaction, highlighting the need for a differentiated approach to support language development in an ever-evolving digital environment. These moderating factors thus call for careful consideration in designing educational strategies and formulating recommendations to best support the integration of digital tools in the language development of young users.

6.1. Age and Developmental Stage

Age and developmental stage play a crucial role in how children absorb and assimilate elements of written language, particularly in the digital context where emojis and digital text coexist. In the early years, linguistic development primarily relies on oral acquisitions and

understanding simple messages, with a limited capacity to process complex written forms. However, with the introduction of digital media, young children begin to experiment with visual forms of communication, such as emojis, which bring a symbolic and expressive dimension that is distinctly different from traditional writing.

At this stage, brain plasticity fosters the integration of new modes of communication, but the specific stage of development also conditions the ability to correctly interpret these symbols. Children under the age of six, for example, often perceive emojis as literal representations rather than as vectors of emotional or contextual nuances. Their understanding of digital text is also limited by their emerging vocabulary and their ability to construct syntactic structures. As they progress toward the end of early childhood and the beginning of primary school, their ability to use and understand these elements improves, favoring a more coherent integration of visual and written language.

Developmental stages thus influence the perception and use of emojis, which can support vocabulary learning and sentence construction but also pose challenges in terms of contextualization or semantic subtleties. Cognitive and linguistic maturation allows children to better grasp the metacommunicative aspect of emojis, enhancing their ability to interpret nuanced messages. In summary, age is a determining factor in how young children approach these new communicational tools, underscoring the need to adapt supports and pedagogical strategies at each stage of their development to optimize their impact on language learning.

6.2. Family and Educational Environment

The family and educational environment plays a decisive role in the impact that the use of emojis and digital text can have on children's language development. Within the home, how adults communicate with the child, their level of engagement with the digital world, and their regular use of digital tools directly influence the nature of linguistic interactions. A family environment that actively integrates rich verbal exchanges, accompanied by visual and interactive supports, promotes balanced linguistic acquisition that is synergistically complemented by the use of emojis.

Moreover, moderation and the quality of digital exchanges with family encourage the development of a varied vocabulary and a more nuanced contextual understanding. Presence in a structured educational setting, such as school or recreational centers, also contributes to language stimulation by offering activities that integrate new technologies. During these activities, the guided introduction of emojis and digital texts allows children to experiment with linguistic registers and better understand their role in contemporary communication. Teachers play a crucial role in integrating these supports into their pedagogical approaches while ensuring that the child maintains a balance between traditional and digital written language. The educational environment should promote a reasoned use of digital tools, encouraging verbalization and reformulation when using emojis to avoid excessive reliance on visual abstraction. Finally, coherence between family and school context, as well as parental supervision in the use of digital supports, are key elements for fostering harmonious linguistic development, allowing the child to master both oral and written language in their social and cultural context.

6.3. Level of Exposure and Variety of Supports

The level of exposure to various digital supports plays a crucial role in the evolution of language development in children. Regular immersion in environments where different forms of supports proliferate, such as tablets, smartphones, computers, or other interactive devices, fosters increased familiarity with the diversity of written codes. The frequency of use, combined with the amount of accessible supports, significantly influences the gradual acquisition and mastery of linguistic skills. Furthermore, the diversity of formats, including short texts, chats, videos, or educational applications, exposes the child to a broader range of syntactic structures and vocabulary. Some platforms also integrate emojis and visual elements that, while enriching communication, modify how children approach language. Prolonged exposure to these supports, especially when daily, can accelerate the adoption of certain linguistic forms characteristic of digital language, while raising questions about their long-term influence on syntactic and lexical development. It also appears that the ability to differentiate between formal and informal registers, as well as understanding communicational nuances, partly depends on the variety and richness of the supports used. Finally, dependence on these digital tools creates a complex relationship with language, which can foster increased linguistic creativity while posing challenges for preserving conventional forms of written language.

7. Educational Consequences and Pedagogical Implications

The pedagogical implications related to the increasing use of emojis and digital text in children's language development require thorough reflection from educators. On the one hand, these tools are valuable resources for enriching vocabulary and diversifying syntactic structures when employed in an interactive and appropriate framework. On the other hand, excessive or unregulated use can promote a form of simplified language that is sometimes disconnected from traditional grammatical rules, which can harm mastery of conventional written language. Therefore, it is essential to adopt a balanced pedagogical approach that promotes a reasoned integration of digital tools while maintaining a focus on linguistic rigor. Teaching strategies should aim to develop children's critical thinking regarding these new codes while allowing them to experiment with different communication registers. Schools can, for example, implement activities aimed at comparing forms of digital and written language or analyzing the meaning of various emojis in their context. Furthermore, the design of specific educational resources should accompany these efforts to help teachers effectively support language learning in a digitalized environment. Ongoing training for educators is also a key step in enabling them to master these tools and use them in a relevant and constructive manner. Finally, it becomes urgent to develop educational awareness around the risks associated with excessive exposure to digital texts, emphasizing the need to preserve advanced linguistic mastery, essential for academic success and effective communication in all its dimensions.

7.1. Strategies for Teaching Written Language

In the context of teaching written language, it is essential to adopt appropriate strategies to optimize linguistic acquisition in children while considering the impact of digital tools such as

emojis. First, a progressive approach should be prioritized, integrating both traditional skills and new modes of expression arising from digital media. The first step is to explicitly strengthen vocabulary through a variety of activities such as word games, read-aloud sessions, and interactive exchanges to solidify lexical understanding in both formal and informal contexts. Moreover, integrating emojis into learning can serve as mnemonic tools, facilitating the memorization and reconsolidation of specific terms while stimulating abstract understanding of symbols and their connection to textual content.

Next, the development of syntactic skills should be addressed through sentence assembly activities, guided writing, and manipulation of simple grammatical structures. Thoughtful use of emojis as supportive or clarifying elements can help children better structure their ideas, allowing them to visually associate certain expressions or emotions with concrete linguistic forms. Additionally, it is crucial to instill in young learners an awareness of metalanguage, that is, the ability to verbalize and analyze their own written production, particularly by distinguishing content from the communicative context. Finally, encouraging oral expression linked to writing fosters metacommunication and the development of reflective capacities, which are essential for balanced mastery of written language in the face of digital transformations.

7.2. Guides for the Pedagogical Integration of Digital Tools

To effectively integrate digital tools into pedagogy, it is necessary to follow a structured approach that fosters a balance between exploiting interactive resources and preserving the linguistic development of the child. First, it is essential to adopt a reflective stance regarding the use of digital supports, ensuring that their use goes beyond mere content reproduction and promotes active student engagement in meaningful linguistic activities. It is recommended to frame these uses with clear guidelines that specify pedagogical objectives, types of content to prioritize, and modes of interaction.

The selection of appropriate tools should also undergo rigorous evaluation, considering their potential to stimulate language development while avoiding excessive dependence on digital communication forms, such as the systematic use of emojis or syntactic shortcuts. The design of activities should encourage language production, with particular attention to stylistic diversity and lexical precision. Furthermore, involving teachers in training on new technologies ensures consistent and informed use, fostering an integrated pedagogical approach.

It is also crucial to encourage cooperation among students through these tools, which can enhance skills in metalanguage and metacommunication while allowing them to experiment with different forms of written expression. Finally, constant vigilance must be maintained regarding the potential impact of digital supports on mastering fundamental skills to ensure that their integration genuinely contributes to balanced and harmonious language development.

7.3. Preserving Mastery of Language in a Digital Environment

Preserving mastery of language in a digital environment requires heightened vigilance to prevent any alteration of fundamental linguistic skills. Intensive use of digital supports, particularly those incorporating emojis, can sometimes lead to excessive simplification of the

linguistic code, compromising lexical richness and syntactic diversity. It is essential, from a young age, to establish balanced educational practices that promote the coexistence of traditional oral and written activities with digital ones. Raising awareness among educators and parents about the importance of appropriate guidance is a key step to prevent textual language from becoming a mere caricature of natural language while retaining its nuances and complexity. Furthermore, it is crucial to develop pedagogical strategies aimed at enhancing linguistic awareness in children, particularly through activities focused on reading, producing structured writing, and critically analyzing digital supports. Implementing workshops or educational programs that incorporate these dimensions contributes to maintaining a balance between using new tools and respecting fundamental language rules. Finally, ongoing research continues to explore how interactions in digital environments influence the emergence of linguistic skills while ensuring the preservation of their quality to guarantee harmonious language development in children in the face of current technological changes.

8. Discussion and Summary of Results

The results of the study reveal a complex interaction between the use of emojis, digital text, and language development in children. It appears that incorporating emojis into written exchanges fosters the acquisition of an enriched visual vocabulary while facilitating the understanding of emotions and communicative intentions. However, this practice may also lead to syntactic simplification, with a tendency to favor short and iconic constructions, potentially at the expense of grammatical complexity. The regular presence of emojis seems to enhance metalinguistic awareness, encouraging children to reflect on the symbolic function of graphic signs, but could also hinder mastery of articulated language if their use becomes predominant. Moreover, digital text, in its pragmatic aspect, offers opportunities to develop discursive and social skills, particularly through the use of emojis as discursive cues or to regulate communication. These elements contribute to an evolution of metalanguage and metacommunication, but their excessive use can generate ambiguities or dysfunctions in the coherence of written discourse. The interaction of these effects is moderated by factors such as age, family or educational context, and frequency of exposure to digital tools. Finally, these observations underscore the urgency of adopting adapted pedagogical strategies to preserve the balance between technological appropriation and harmonious development of oral and written language skills in children.

9. Limitations and Avenues for Research

The limitations of this study primarily lie in the complexity of precisely measuring the impact of emojis and digital text on language development, particularly given the diversity of usage contexts and the adult strategies adopted. The variability of digital devices, levels of exposure, and pre-existing skills in children also pose significant methodological challenges. Furthermore, most studies focus on restricted developmental periods, limiting the understanding of long-term evolution. The transversality of socio-educational and cultural factors is not always integrated thoroughly, which could significantly influence the results. Additionally, the difficulty in dissociating the specific impact of emojis from the overall context of digital text complicates data interpretation. These limitations open up perspectives

for future research, particularly through longitudinal studies to track the evolution of language skills related to exposure to digital technologies. Interdisciplinary approaches involving psychology, linguistics, and educational sciences would also be relevant to better understand these complex processes. Expanding samples, standardizing measurement instruments, and considering additional variables such as motivation or personality could strengthen the reliability of conclusions. Finally, integrating qualitative analysis could provide deeper insights into the underlying mechanisms, particularly how children mobilize these tools in their daily language practices.

10. Conclusion

The recent evolution in the use of emojis and digital texts significantly modifies the dynamics of language development in children. While these tools offer new communicational resources, their impact on vocabulary acquisition, syntactic construction, and metalanguage raises essential questions regarding the balance to be maintained between mastery of traditional language and adaptation to digital supports. Emojis, as iconic indicators, enrich communication by enhancing pragmatics and facilitating the transmission of emotional and contextual nuances. However, their excessive or inappropriate use can lead to simplification of syntactic structures and alteration of metalanguage, potentially impacting the ability to produce rich and nuanced discourse in formal settings.

Prolonged exposure to these forms of text also changes how children perceive discourse coherence and regulate their written expression. The presence of emojis as discursive cues or tone markers can reinforce or, conversely, weaken the understanding of logical relationships between propositions. This raises the issue of their pedagogical integration to develop in children a balanced mastery of both digital and traditional language codes. The variability of effects depends on moderating factors such as age, family and educational environment, or the diversity of supports used.

It is crucial to design educational strategies that support this digital transition without compromising the richness of written language. Implementing targeted pedagogical tools aimed at critical and controlled use of emojis is an essential step to preserve the quality of language development. Reflection on these issues should be part of a multidimensional approach to foster a harmonious integration of new communicational practices while preserving the fundamentals of written language

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