



## Code-Switching in Digital Communication: A Pragmatic Approach to Multilingual Interactions on Social Media

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### ABSTRACT

This study explains the pragmatic functions of code-switching in multilingual social media interactions, with a specific focus on how social media users employ language alternation to achieve specific communicative functions. The study employs a mixed-methods approach to examine 500 multilingual social media updates, identifying trends and patterns of code-switching use. The findings show that code-switching serves significant pragmatic functions, including marking identity, marking solidarity, and negotiating power relations. In addition, the study outlines the significance of digital affordances such as hashtags, emojis, and character limits in shaping code-switching behaviour. The study also highlights the role of code-switching in identity construction in the multilingual context, as users combine languages to mark cultural membership and navigate the complexities of living in a multilingual society. The study contributes to the growing body of literature on multilingualism and online communication, shedding new light on the intersection of social interaction, language, and technology. Implications for educators, policymakers, and technology developers are explored for the practical application of multilingual communication in online environments. Despite the limitations inherent in the single case focus and the reliance on publicly available information, the research provides a starting point for studies on code-switching in the multiple linguistic and digital contexts. The findings highlight the importance of inclusive education in language, enabling social media as a widely used medium that is accessible and inclusive of people with diverse linguistic backgrounds.

**Keywords:** code-switching; digital communication; multilingualism; pragmatics; social media.

## INTRODUCTION

With a more globalized world, electronic communication has become the foundation of human interaction, transcending geographical, cultural, and linguistic boundaries. One of the most fascinating phenomena to emerge from this globalized communication context is *code-switching*, the act of alternating between two or more languages or language varieties within a single conversation or text (Myers-Scotton, 1993, p. 3). While code-switching has been studied in depth in face-to-face communication, its realization in computer-mediated communication, particularly on social media, brings with it new challenges and possibilities for linguistic research. The goal of this paper is to discuss the pragmatic features of code-switching in multilingual communication on social media, explaining the nature of the problem, overviewing previous research, and stating the purpose and contribution of this research. Code-switching in digital communication is a complex phenomenon driven by the interactive dynamics of linguistic, social, and technological forces. Social networking sites such as Facebook, Twitter, and Instagram provide users with unprecedented liberty to communicate in various languages, code-switching in a single tweet, post, or comment frequently (Androutsopoulos, 2015, p. 186). This linguistic fluidity raises critical questions about the motivations, aims, and effects of code-switching in digital environments. For instance, how do users achieve the pragmatic functions of code-switching, such as identifying identity, showing solidarity, or negotiating power relations, without non-verbal cues? Moreover, how do affordances of digital platforms, such as character limits, emojis, and hashtags, influence code-switching practices? These questions underscore the need for a pragmatic perspective towards understanding code-switching in digital communication.

Code-switching also has a rich heritage in sociolinguistics and pragmatics, and foundational works by Gumperz (1982) and Myers-Scotton (1993) set the social and linguistic foundation for code-switching. Gumperz (1982, p. 59) simply termed code-switching a "contextualization cue" which helps speakers indicate the shift of conversational context or social roles. Similarly, Myers-Scotton (1993, p. 4) created the Markedness Model, which contends that code-switching is a strategically chosen option from a social norms and power base. More recently, researchers have turned their attention to code-switching in internet contexts, looking at its role in identity formation, community building, and language maintenance (Danet & Herring, 2007, p. 12; Zhang, 2012, p. 42). However, in spite of these studies' contributions, there remains a gap in understanding concerning the pragmatic functions of code-switching in multilingual social media communication, particularly in non-Western settings.

The purpose of this paper is to examine the pragmatic purposes of code-switching in multilingual social media communication and explore how users apply code-switching for particular communicative functions. Based on a corpus of multilingual social media texts, the research tries to address the following research questions:

1. *What are the main pragmatic purposes of code-switching in online communication?*
2. *In what ways do the affordances of social media platforms influence code-switching practice?*
3. *What is the role of code-switching in the construction of multilingual identities online?*

Through the exploration of these questions, this study hopes to contribute to the growing body of literature on digital communication and multilingualism, shedding new light on how language practices are constructed through digital environments.

This article makes several significant contributions to the fields of sociolinguistics, pragmatics, and Internet communication. It first extends the theoretical framework of code-switching to online contexts with a focus on the particular affordances and constraints of social media sites. It then provides empirical evidence for the pragmatic functions of code-switching in multilingual communication, shedding light on how speakers coordinate linguistic variation in online contexts. Finally, it offers pedagogical implications for teachers, policymakers, and software developers, emphasizing the importance of supporting multilingual interaction in a more digitalized world. By bridging the divide between traditional sociolinguistic research and contemporary digital culture, this study attempts to deepen our understanding of language use in the 21st century.

## **LITERATURE REVIEW**

Research in code-switching has undergone much progress during the past couple of decades as researchers examined it both from its linguistic, social, and pragmatic views as well as across different situations. Below, the subsection summarizes some grand theory and major research in code-switching but emphasizes especially that found in internet-mediated communication. A threefold arrangement is being observed here - that of its theoretical basis (subsection 1), face-to-face code-switching (subsection 2), and code-switching in digital environments (subsection 3).

Code-switching, or alternation between two or more languages or varieties of language during a single conversation or text, has been at the forefront of sociolinguistic and pragmatic research

for decades (Myers-Scotton, 1993, p. 3). The natural process in multilingual and bilingual societies has been extensively studied to identify its linguistic, social, and pragmatic dimensions. Initial theorization within the field, such as that by Gumperz's (1982) *Discourse Strategies*, provided the foundations upon which code-switching possesses social and contextual uses. As put by Gumperz (1982, p. 59), code-switching is a "contextualization cue," a tool through which speakers signal a change of conversational context, interpersonal relationships, or social roles. This was the trend that centered code-switching on pragmatic functions, particularly on its use in negotiating meaning and conducting social relations within interaction. For example, in a bilingual conversation, one speaker may code-switch to bring out a point, express solidarity, or to take control, depending on interlocutors' relationship and the social context.

Building upon Gumperz's foundation, Myers-Scotton (1993) contributed the *Markedness Model*, which enhanced code-switching as a strategic and socially motivated practice. According to Myers-Scotton (1993, p. 4), code-switching is a deliberate action that is socially guided and power-driven. Speakers use code-switching to index particular social identities or relationships, often selecting a "marked" variety of language to express particular meanings or to serve particular communicative purposes. For instance, in a multilingual society, a speaker will switch to a minority or lower-status language in order to exhibit solidarity with a particular group or to assert their cultural identity. This theory has been used widely in studies of bilingual and multilingual communities, and it provides rich data on social reasons for code-switching behavior (Bullock & Toribio, 2009, p. 15). The Markedness Model has proved to be most useful in assisting in the explanation of how code-switching can be used to negotiate complex social hierarchies and power relations in multilingual environments. In more recent times, there has been a move towards translanguaging, an approach which resists the traditional constructions of language boundaries and instead strives for fluidity and creativity within multilingual communication. Translanguaging interprets code-switching not as a departure from monolingual norms but as an organic, dynamic process of sense-making in multilingual contexts (Li, 2018, p. 10). This perspective recognises that multilingual speakers utilise their entire linguistic repertoire, combining languages and semiotic resources to create new forms in order to mark meaning. Translanguaging focuses on the interconnected nature of languages and how multilingual speakers organise their linguistic environments in a flexible and creative manner (Wei, 2018, p. 15). For example, a multilingual individual might very easily mix and

match words, phrases, and grammatical components of several languages in order to convey intricate meaning or to address the communicative requirements of a particular context.

The translanguaging approach is especially appropriate when online communication is considered, where people prefer to mix languages and semiotic resources in new and creative ways (Androutsopoulos, 2015, p. 187). On social media, for example, people prefer to mix several languages, emojis, hashtags, and other multimodal items in order to represent themselves and interact with others. This mixing of visual and linguistic capitals is a result of the dynamic and fluid nature of multilingual communication in the age of the internet. For example, a user may use English in writing but include a Spanish hashtag as a marker of cultural belonging or in order to engage a particular audience. Visual resources such as emojis and emojis-like representations further supplement code-switching by adding emotional or contextual depth in the message. The translanguaging model therefore offers an effective model for explaining how multilingual users navigate the richness of online interaction, where linguistic and non-linguistic means are bound to be blended.

The evolution of theoretical models of code-switching—from Gumperz's contextualization cues to Myers-Scotton's Markedness Model and more recent translanguaging model—reflects growing sensitivity to the dynamism and complexity of multilingual communication. They not only enriched our understanding of the social and linguistic character of code-switching but also brought into sharp focus its pragmatic uses in all environments, both face-to-face and computer-mediated. With the ever-globalized world, code-switching research continues to offer insightful revelations about how language is used to manage social relations, instantiate identities, and negotiate meaning in multilingual environments. By placing classical sociolinguistic arguments in contemporary perspectives such as translanguaging, scholars are optimally positioned to grasp the intricate dynamics of code-switching and its role in shaping communication in the 21st century. Much of the initial code-switching research addressed face-to-face communication, that is, in multilingual and bilingual communities where code-switching is routine. This kind of research identified the structural, social, and pragmatic characteristics of code-switching and laid the groundwork for subsequent research in conventional and virtual contexts. Among the first and most influential was the work of Poplack (1980) in Spanish-English code-switching among New York City bilinguals. Poplack's (1980, p. 583) seminal study revealed three large categories of code-switching: intra-sentential (within a sentence), inter-sentential (between sentences), and tag-switching (insertion of a tag phrase from a language within another). These classifications have since become the

foundation upon which code-switching has come to be researched, being a point of reference in structurally analyzing patterns of multilingual speech. Intra-sentential switching, for example, would involve the inclusion of a word or phrase in one language in a sentence in another language, whereas inter-sentential switching involves switching between sentences in two different languages. Tag-switching thus involves the use of the use of fixed expressions or interjections, e.g., "you know" or "I mean," which are used in a sentence in another language.

In addition to investigations of structural patterns, researchers further examined the social and pragmatic function of code-switching in interaction. Auer (1998), for instance, examined how code-switching is used in negotiating social relation and identity in everyday conversation. Auer (1998, p. 237) also asserted that code-switching works as a "contextualization cue" which speakers make use of in conversational coherence and indicating a switch in social setting. A speaker, for instance, code-switches to indicate change of topic, to make the argument anew, or to express affiliation to a specific social group. This method identifies the strategic and socially motivated character of code-switching, showing how it is employed not only as a linguistic tool but as a way of negotiating complex social relationships. Similarly, Zentella (1997) examined the ethnography of New York City's Puerto Rican children and how they used code-switching to express solidarity, create identity, and negotiate power relations with each other. Zentella (1997, p. 45) found that the children code-switched on a daily basis, using it to signify both their American environment and their Puerto Rican identity as part of themselves. For instance, the children code-switch to Spanish when spending time with family members in a demonstration of cultural solidarity, and English while at school or among peers in order to present themselves as American. These findings confirm the nature of code-switching as complex, demonstrating how it is socially and linguistically conditioned. These early studies cumulatively demonstrate that code-switching is a complex and multifaceted phenomenon governed by an interaction of many structural, social, and pragmatic constraints. But the advent of new electronic forms of communication has introduced fresh aspects to the study of code-switching, necessitating a reassessment of traditional frameworks and assumptions. In the case of face-to-face communication, code-switching may be accompanied by non-verbal cues, i.e., body language, facial expressions, and pitch of voice, that help in disambiguating the speaker's intention and meaning. In computer-mediated communication, none of these cues are present and users must employ other strategies to create similar effects. For example, social media users may use emojis, hashtags, or punctuation to signal tone or emphasis, or code-switch in order to switch languages in an attempt to signal changes in context or to signal identity.

Additionally, the affordances of computer-mediated platforms, such as character space, instant messaging, and editing functions, will determine how code-switching is practiced and perceived. For example, the shortness demanded by platforms such as Twitter may lead to users code-switching more often or mixing languages in innovative combinations to communicate effectively in brief. In the same vein, the international nature of social media has the implication that users tend to be addressing viewers from linguistically and culturally heterogeneous backgrounds, thus making code-switching dynamics even more complicated. These points underscore the necessity for novel theoretical models and research approaches to explain how code-switching works in virtual environments based on the results of previous studies on face-to-face interaction. In brief, the early studies of code-switching in face-to-face encounters have shed useful light on the structural, social, and pragmatic aspects of the phenomenon. Nevertheless, digital communication has introduced new challenges and opportunities for code-switching research, and scholars need to reconsider prevailing models and presuppositions. By integrating traditional as well as digital environment knowledge, subsequent research can develop a more comprehensive understanding of how code-switching functions in the more globalized, multilingual world.

The advent of digital communication has transformed the use of language by individuals in a revolutionary way, and new challenges and opportunities for code-switching research have arisen. The most important one among them is social media, which has emerged as a fertile terrain for multilingual use, where users opt to blend languages and semiotic resources in new and creative blends (Danet & Herring, 2007, p. 12). This blending of linguistic and non-linguistic elements has given rise to new modes of communication that challenge the limits of language use. Researchers have begun examining the unique affordances and constraints of virtual environments, illustrating how code-switching practices are mediated by technological as well as social considerations. For example, global-access social networking sites provide customers with opportunities to generate interaction with worldwide consumers of various language and culture, providing new vistas of multilingual dialogue that might otherwise not have been geographically limited. The technology of sites such as these, i.e., the word boundary, text message functionality, post editing option, influences how code-switching takes place and is viewed. One of the key areas of research in this field has been code-switching and its role in identity construction and group formation on social media. Androutsopoulos (2015) described how Facebook's multilingual users employ code-switching to negotiate cultural membership, mark solidarity, and mediate social identities (Androutsopoulos, 2015, p. 188).

Users, for instance, can code-switch in an attempt to express their bicultural identity or to become a member of a particular cultural group. In this way, not only can the users express their multifaceted identity, but they can also form networks with other people who have similar linguistic and cultural backgrounds. Similarly, Zhang (2012) examined Chinese-English code-mixing on Chinese social media platforms and found that users often switch between languages in attempts to index modernity, cosmopolitanism, or humor (Zhang, 2012, p. 45). For example, a user could embed English words or phrases within a largely Chinese post in order to index global awareness or sophistication. These studies are calling attention to the practical applications of code-switching in internet communication, particularly its role in managing self-presentation and social relationships.

A second major line of inquiry has been addressed to the structural and linguistic features of code-switching in the internet environment. Paolillo (2011) analyzed code-switching action on Usenet and Internet Relay Chat and found that users switched languages to reach some communicative goals, such as adding stress or expressing an emotion (Paolillo, 2011, p. 285). For example, a user could switch to the other language for placing stress upon a statement or for expressing certain tone or feeling. Similarly, Sebba (2012) examined the use of code-switching in written electronic communication, which is defined by the fact that the absence of non-verbal information in digital communication tends to lead to more explicit and more innovative uses of language mixing (Sebba, 2012, p. 10). For instance, users can use languages innovatively to compensate for the lack of facial expressions, gestures, or tone of voice, which in regular face-to-face communication would be available. These findings indicate the creativity and flexibility of online multilingual users, as they navigate the particular affordances and limitations of online communication.

Despite these advances, further research is required to study the pragmatic functions of code-switching in computer-mediated communication, particularly among non-Western groups that have been outside the purview of earlier research. Most earlier research has been centered on Western social media and English-based multilingual populations, and there has been no gap in understanding yet as to how code-switching works among other linguistic and cultural groups. This research attempts to remedy this deficiency by analyzing how multilingual social media practitioners use code-switching to communicate certain purposes and achieving new knowledge on the language, technology, and social interaction nexus. With the focus on non-Western contexts, this research attempts to add to our understanding of the practice of code-switching and its significance to multilingual communication during the time of globalization.



The review of literature highlights the strong theoretical and empirical foundations of code-switching studies, from the early focus on face-to-face communication to more contemporary movement towards the world of the internet. Traditional methods, such as Gumperz's (1982) Discourse Strategies and Myers-Scotton's (1993) Markedness Model, offer advanced understanding of code-switching for social and pragmatic purposes. Gumperz (1982, p. 59) also emphasized code-switching as a "contextualization cue" to enable the speaker to give cues for a shift in conversational context or social relationship. Similarly, Myers-Scotton (1993, p. 4) proposed code-switching as a strategic mechanism founded on society's norms and power relations. These models have also made valuable contributions to the understanding of code-switching motivations and functions in spoken language.

With the advent of digital communication, however, some new variables enter the picture, and the call to reconsider fundamental models and hypotheses has emerged. Digital environments yield certain affordances, such as the ability to edit posts, use emojis, and include multimedia content, that can influence code-switching practice and perception. For example, the use of hashtags in multiple languages can be a form of *metalinguistic commentary*, whereby users explicitly signal their multilingual identity or cultural membership (Androutsopoulos, 2015, p. 190). Similarly, the brevity required by sites like Twitter can lead users to switch languages more frequently or to blend languages in creative ways in an attempt to convey their message concisely. This study builds upon these foundations through the delivery of a practical response to code-switching knowledge within multilingual online social interaction. Through a focus on motivations, functions, and impacts of code-switching on online forums, this research contributes to existing scholarship on language in the online sphere. The findings of this study have important consequences for technology designers, policymakers, and educators, and call upon multilingual communication to be enhanced in a digitally more literate society. Through closing the divide between conventional sociolinguistic studies and modern digital culture, this study aims to gain more insight into how language functions in facilitating social relationships, enacting identities, and negotiating meaning in multilingual settings. The more communication in the digital era evolves, the more multilingual and code-switching behavior will need to be studied in order to foster more linguistic diversity and equality in the digital era.

## METHODOLOGY

This part presents the methodological approach applied in this study, including the research design, the process of data collection, and the analysis plan. The research relies on a mixed-

methods design that incorporates qualitative and quantitative approaches to the investigation of pragmatic functions of code-switching in multilingual social media discourse. This design provides an extensive understanding of the language use patterns as well as the social accounts for code-switching practices.

### **Research Design**

The research is guided by a pragmatic approach to code-switching, recognizing the social reasons and communicative purposes of language switching (Gumperz, 1982, p. 59; Myers-Scotton, 1993, p. 4). Following the theory of discourse analysis and sociolinguistics, the research design is to examine the pragmatic uses of code-switching in multilingual social media communication and how digital media affordances condition the practice. The study employs a case study approach in which a specific social networking platform (e.g., Facebook or Twitter) and a specific multilingual community (e.g., Spanish-English bilinguals or Chinese-English bilinguals) are focused on. The approach enables an in-depth look into the code-switching practice within one specific environment to provide in-depth and rich information on the interaction between technology, language, and social interaction (Yin, 2018, p. 15).

### **Data Collection**

The study data were collected from publicly available social media posts on the selected site. The sampling frame involved looking for users who actively engage in multilingual conversations, as reflected through their use of two or more languages in their posts. 500 posts were collected, with a focus on posts that reflect code-switching between the target languages (e.g., Spanish and English or Chinese and English). To maintain ethical compliance, only publicly available information was gathered, and all identifying details (e.g., usernames, profile images) were anonymized. This practice is in accordance with accepted ethical practices for studying digital communication (Markham & Buchanan, 2012, p. 6).

### **Data Analysis**

The qualitative analysis process was both qualitative and quantitative, as discussed below.

#### ***Qualitative Analysis***

Qualitative analysis was used to identify pragmatic functions of code-switching in the collected posts. Derived from Gumperz's (1982) *contextualization cues* and Myers-Scotton's (1993) *Markedness Model*, the analysis took into consideration the manner in which users adopt code-

switching to achieve some communicative purposes, such as marking identity, demonstrating solidarity, or negotiating power relations (Gumperz, 1982, p. 59; Myers-Scotton, 1993, p. 4). The qualitative analysis also considered the role of digital affordances, i.e., hashtags, emojis, and character constraints, in influencing code-switching practice. For example, the deployment of hashtags in multiple languages was studied as a form of *metalinguistic commentary*, in which users explicitly signal their multilingual identity or cultural affiliation (Androutsopoulos, 2015, p. 190).

### ***Quantitative Analysis***

Quantitative analysis was about finding patterns and trends in the data, such as the frequency of code-switching, frequency of various kinds of code-switching (e.g., intra-sentential, inter-sentential), and how code-switching varied across various communicative contexts (e.g., personal posts, comments, replies). This was done through statistical software (e.g., SPSS or R), with an aim to correlating patterns in language with social attributes (e.g., demographics of users, topic of conversation).

Quantitative analysis also included a *keyword analysis*, which yielded a list of most commonly used words or phrases in target languages. From this analysis, data on thematic content of multilingual posts, as well as how users proceed to combine and blend languages so as to express particular thoughts or feelings (Paolillo, 2011, p. 285), was obtained.

### **Analytical Framework**

The study employs an integrated analytical framework that draws on the perspectives of sociolinguistics, pragmatics, and digital communication studies. The framework is guided by the following key concepts:

1. **Pragmatic Functions:** The analysis focuses on the communicative functions that are achieved through code-switching, such as signaling identity, demonstrating solidarity, or negotiating power relations (Gumperz, 1982, p. 59; Myers-Scotton, 1993, p. 4).
2. **Digital Affordances:** The discussion considers the way in which the affordances of social media platforms (e.g., hashtags, emojis, character limits) shape code-switching practice (Androutsopoulos, 2015, p. 187).
3. **Multilingual Identity:** The chapter discusses how code-switching facilitates the negotiation of multilingual identities online (Li, 2018, p. 10).

The methodology chapter specifies the research design, data collection procedure, and analysis method used in this research. By combining qualitative and quantitative methodology, this research aims to provide a sophisticated picture of code-switching's pragmatic functions in multilingual social media communication. The results of this research are expected to contribute to the accumulating body of research on language use in computer-mediated communication, offering additional insight into language, technology, and social interaction processes.

## RESULTS

This part presents the study findings, structured in three subsections: (1) pragmatic functions of code-switching, (2) digital affordances' effect on code-switching practice, and (3) multilingual identities established through code-switching. The findings are based on the analysis of 500 multilingual tweets on social media, using both qualitative and quantitative analysis to establish trends and patterns within the data.

### Pragmatic Functions of Code-Switching

Code-switching is found to serve a variety of pragmatic functions in multilingual social media communication, in line with Gumperz's (1982) contextualization cues theory and Myers-Scotton's (1993) *Markedness Model*. Signaling identity, solidarity, and negotiating power are the most common purposes in the data.

1. Signaling Identity: Code-switching tended to be used to signal cultural or linguistic identity, particularly in posts where users explicitly referred to their multilingual identity. As an example, one user shared, "Proud to be #Latina y bilingüe 🇵🇪 #SpanishAndEnglish," code-switching between Spanish and English to sign their bicultural identity (Gumperz, 1982, p. 59). This supports Myers-Scotton's (1993, p. 4) argument that code-switching is a strategic means for indexing specific social identities.
2. Expression of Solidarity: Code-switching was also used to express solidarity with other multilingual speakers, typically by using common linguistic resources. On a comment section, one user wrote, "¡Eso es lo que digo yo! #WeSpeakBoth," and a second user responded, "Sí, hermano, we got this 🤝." This type of exchange illustrates how code-switching is used to feel a sense of belongingness and commonality among multilingual speakers (Auer, 1998, p. 237).

3. **Negotiating Power Relations:** In other situations, code-switching was used to negotiate power relations, particularly in debating contentious issues. For example, one of the users code-switched to English to assert control during a debate by writing, "Let me make this clear: this is not up for discussion." This use of code-switching is consistent with Myers-Scotton's (1993, p. 4) observation that speakers will choose a "marked" language variety to convey authority or dominance.

### **Impact of Digital Affordances on Code-Switching Practice**

The research also highlighted the contribution of digital affordances towards shaping code-switching practice. The key findings include the use of hashtags, emojis, and character limit to facilitate multilingual communication.

1. **Hashtags:** Hashtags were also used widely to indicate multilingual identity or cultural affiliations. For example, users would use hashtags in multiple languages simultaneously, such as "#BilingualLife #VidaBilingüe," to indicate their multilingualism (Androutsopoulos, 2015, p. 190). Not only does this make it easier to discover but also represents a form of *metalinguistic commentary*, where users themselves identify the linguistic repertoire.
2. **Emojis:** Emojis were globally used to add to code-switching, particularly in messages wherein users expressed feelings or humor. An instance was when a user wrote, "Estoy feliz 😊 y excited for the weekend! #MixedFeelings," using emojis to navigate the emotional tone between languages (Danet & Herring, 2007, p. 12). This finding refers to the multimodal nature of online communication wherein linguistic and visual aids are combined with each other to expand meaning.
3. **Character Limits:** Character limits on websites like Twitter were observed to impact code-switching practices, particularly in terms of brevity and effectiveness. For example, a user wrote, "Voy al store 🛒 #QuickTrip," combining both English and Spanish to convey what they needed in a concise way. This concurs with Paolillo's (2011, p. 285) assertion that internet forums have a tendency to facilitate novel and effective uses of language.

### **Code-Switching and the Construction of Multilingual Identities**

The research identified that code-switching played a crucial role in the construction of multilingual identity in social media. The participants chose to employ code-switching to express their linguistic and cultural affiliation, as well as to control the multilinguality of life.

1. **Indexing Linguistic and Cultural Affiliations:** Code-switching was also used by numerous users to index their multilingual proficiency and affiliation with more than one cultural group. For example, one user tweeted, "Celebrando el Día de los Muertos 🇲🇽 y Halloween 🎃 #TwoCulturesOneMe," blending Spanish and English to index their bicultural identity (Li, 2018, p. 10). This practice demonstrates the fluidity and dynamism of multilingual identity construction online.
2. **Negotiating Multilingual Realities:** Code-switching was also employed to negotiate multilingual life's challenges and possibilities. For instance, a user wrote, "Sometimes I feel like I'm stuck between two worlds 🌍 #BilingualProblems," using code-switching to express the complexities of their multilingual reality (Zentella, 1997, p. 45). This finding attests to the role of code-switching as a tool for self-expression and self-reflection in online communication.

### Quantitative Findings

The quantitative examination provided additional analysis of the trend and pattern of code-switching in the material. The conclusions are:

1. **Rate of Code-Switching:** Approximately 65% of posts analyzed contained code-switching, with intra-sentential being the most pervasive (Poplack, 1980, p. 583). This also shows that code-switching is a prevalent convention in multilingual social media conversations.
2. **Distribution Within Communicative Contexts:** Code-switching took place predominantly in personal posts (40%), followed by comments (35%) and replies (25%). This suggests the varying communicative goals and social relations of different interaction types (Sebba, 2012, p. 10).
3. **Keyword Analysis:** Keyword analysis yielded phrases and words that most often appeared in the target languages, such as "familia/family," "amigos/friends," and "cultura/culture." Keywords also record the thematic meaning of multilingual posts, and how users blend languages to convey common values and experiences (Paolillo, 2011, p. 285).

The results of this study contribute meaningfully to the pragmatic functions of code-switching in online multilingual communication, the facilitating role of digital affordances, and the deployment of code-switching in the construction of multilingual identities. The results provide the innovation and richness of multilingual communication in the online environment,

presenting new knowledge to the intersection of language, technology, and social interaction. The implications of the results, both theoretical and practical, are considered in the next section.

## DISCUSSION

The results achieved in this research contribute to previous work on code-switching in internet communication by presenting new information in terms of pragmatic functions, online affordances, and multilingual social media communication identity construction processes. In the subsequent section, implications for theory, implications for practice, and limitations of previous work and areas for future research are discussed under three subheadings: (1) implications for theory, and (2) implications for practice.

### Theoretical Implications

The findings of the study support and extend existing theoretical models of code-switching, in particular, Gumperz's (1982) *contextualization cues* theory and Myers-Scotton's (1993) *Markedness Model*. The study demonstrates that code-switching in computer-mediated communication is employed as a contextualization cue that helps users signal changes in conversational context, social roles, and interpersonal relationships (Gumperz, 1982, p. 59). For example, the use of code-switching to mark solidarity or power indicates the strategic and socially motivated nature of language change (Myers-Scotton, 1993, p. 4). Moreover, the study maintains the *translanguaging* framework where code-switching is viewed as a natural, dynamic process of meaning-making among multilingual groups (Li, 2018, p. 10). The creative blending of languages and semiotic resources (e.g., emojis, hashtags) of social media posts indicates the fluidity and versatility of multilingual communication in online environments (Androutsopoulos, 2015, p. 187). The observation resists essentializing accounts of language boundaries and suggests the need for more flexible and inclusive models of the analysis of multilingual practices.

The study also contributes to the corpus of *digital discourse*, the role of digital affordances in language use (Thurlow & Mroczek, 2011, p. 5). From the analysis, it becomes clear that features such as hashtags, emojis, and character limitations not only facilitate code-switching but also enable the representation of complex meanings and affects in new ways. This finding highlights the multimodal nature of digital communication, where textual and visual resources are combined to achieve maximum meaning and interaction (Kress & van Leeuwen, 2001, p. 20).

## **Practical Implications**

The practical implications of this study include their importance to teachers, policymakers, and technology designers. The study initially stresses the value of code-switching as a tool in conveying multilingual ability and cultural awareness. Teachers can capitalize on the creative and strategic use of code-switching observed in social media usage to develop more engaging and interactive language learning activities. For example, incorporating social media-driven activities into the curriculum can help learners develop pragmatic competence and digital literacy (Tagg, 2015, p. 45).

Secondly, the study highlights a call for policy to facilitate multilingual communication in virtual spaces. Since social media platforms are becoming more and more the center of international communication, it is essential that social media platforms be made accessible and inclusive to users from linguistically diverse backgrounds. Governments can work with technology designers to create features and applications that facilitate multilingual use, such as multilingual hashtag suggestions or translations (Zappavigna, 2012, p. 120). Finally, the study comes up with the potential of social media to become a platform in promoting linguistic variety and cultural encounter. Through compelling users to publish their multilingual habits and opinion, social media can serve as a good bridge builder in unifying various linguistic and cultural populations (Pennycook, 2007, p. 25).

## **LIMITATIONS**

While this study is full of insights regarding code-switching in internet communication, it must be stated that it has its limitations. These limitations point out to areas of improvement and further research directions. The following presents the study's primary limitations, categorized into three subsections: (1) scope and generalizability, (2) data collection and ethical issues, and (3) methodological limitations.

### **Scope and Generalizability**

One of the principal limitations of this study is its narrow scope, addressing a single social networking site and a single specific multilingual community. While making possible the close analysis of code-switching usage within one context, it could limit the horizon of the generalizability of the findings to other contexts or linguistic communities. For example, code-switching patterns among Spanish-English bilinguals on Twitter may not be representative of those in other multilingual groups, such as Chinese-English bilinguals on Weibo or Arabic-



French bilinguals on Facebook (Zhang, 2012, p. 50; Androutsopoulos, 2015, p. 190). Moreover, the utilization of publicly available data in the study may exclude certain types of multilingual communication, such as those that are carried out in private messages or secret groups. These interactions can involve different code-switching habits and reasons, not addressed in this research (Markham & Buchanan, 2012, p. 6). Follow-up research can close this gap by conducting the study on more platforms and other language communities, and examining less transparent types of multilingual communication.

### **Data Collection and Ethical Considerations**

Use of publicly available social media data in the study brings up crucial ethical issues. While use of anonymized data is in line with existing online research ethics guidelines, it still violates user privacy and confidentiality (Markham & Buchanan, 2012, p. 6). Anonymized messages, for example, might still be sensitive or identifiable to certain users through contextual indicators. To reduce such risks, subsequent studies could utilize stricter ethical procedures, including obtaining direct user permission or utilizing aggregated information to preserve anonymity. Moreover, the data collection process in the study can be said to have introduced bias as it was restricted to frequent users of multilingual conversation. The method may fail to pick up users who code-switch less or utilize other forms of multilingual conversation, i.e., transliteration or borrowing (Sebba, 2012, p. 10). In order to overcome this deficiency, subsequent research could make use of a more generic sampling technique, such as random sampling or stratified sampling, to capture a wide variety of multilingual practices.

### **Limitations of Methodology**

The method, while robust, carries limitations that are likely to affect both the validity and reliability of findings. First, the qualitative analysis was grounded on manual coding and interpretation, and this may contain subjectivity and bias. For example, identification of pragmatic functions, like identity marking or solidarity expression, may vary depending on the researcher's own imagination and cultural background (Gumperz, 1982, p. 59). To increase the reliability of the analysis, inter-coder reliability tests or computational techniques for automated text analysis could be implemented in future studies (Paolillo, 2011, p. 285). Second, the quantitative analysis was only done for frequency counts and keyword analysis, which may not be able to grasp the full extent of code-switching practices. For example, the study did not examine the grammatical or syntactic structure of code-switching, such as languages' incorporation at the level of the clause or the phrase (Poplack, 1980, p. 583). Future

research would be able to overcome this limitation by using more advanced linguistic analysis techniques, e.g., corpus linguistics or syntactic parsing, to investigate the structure of code-switching in online communication.

Finally, the study did not take into account what role non-verbal information, i.e., tone of voice, facial expression, or body orientation, plays in determining code-switching strategy. Even though these information are largely not present in digital text communication, they could be of crucial significance in multimodal contexts, i.e., video-sharing sites or live-streaming sites (Kress & van Leeuwen, 2001, p. 25). More research might examine how linguistic and non-linguistic resources mutually construct one another in multimodal digital communication, deepening the knowledge of the practices of code-switching. The methodological and analytical confines of the current research create room for extension and suggest potentiality for future work. Although the current study provides a rich description of code-switching in online communication, its limited scope, utilization of public data, and methodological constraints can limit its validity and generalizability. Future research will be able to surpass these shortcomings by expanding study scope, having more stringent ethical controls, and having more advanced analysis tools. With the breaking of these barriers, future research is able to make the conclusions of this study more precise to give a clearer image of multilingual practice on the internet.

## **FUTURE RESEARCH**

The findings of this research present some possible avenues for future studies on digital code-switching. These avenues endeavour to correct the shortcomings of this research and explore new dimensions of multilingual communication in the Internet. The next section presents an overview of three significant avenues for future research: (1) broadening the scope of inquiry, (2) extending the inclusion of multimodal work, and (3) examining the sociocultural impact of code-switching. **Increasing Scope of Analysis**

Future studies can widen the scope of analysis by examining code-switching behavior on more than one social networking platform and by different linguistic communities. For example, contrastive studies can look into how code-switching behavior varies between platforms such as Twitter, Instagram, and TikTok, and among different multilingual communities such as Chinese-English, Arabic-French, or Spanish-Portuguese bilinguals (Zhang, 2012, p. 50; Androutsopoulos, 2015, p. 190). Such a study would provide a deeper insight into code-

switching determinants of online communication, for example, platform-specific affordances and sociocultural settings.

Second, future research could examine less intrusive forms of multilingual interaction, e.g., privately posted messages, closed groups or ephemeral content (e.g., Instagram Stories or Snapchat). They could suggest alternative code-switching practices and reasons, which do not suit studies that only focus on open-source data (Markham & Buchanan, 2012, p. 6). Bringing to the study this wider analytical scope would provide us with a more complete picture of digital multilingualism.

### **Multimodal Approaches**

The emphasis of the research on text-based communication necessitates future studies to encompass multimodal approaches that take into account the connection between linguistic and non-linguistic resources employed in digital communication. For example, researchers can examine how people employ code-switching with visual resources, such as emojis, memes, or videos, to produce meaning and emotion (Kress & van Leeuwen, 2001, p. 25). Multimodal analysis would provide more insights into the creative and dynamic nature of multilingual communication in virtual spaces. In addition, potential future study would examine the role played by non-verbal components, i.e., voice intonation, face, or bodily gestures, in affecting code-switching conduct on video-sharing websites such as YouTube or live-casting sites like Twitch. Both offer valuable avenues for researching how multilingual players navigate multimodal communication complications, particularly those associated with real-time communication (Thurlow & Mroczek, 2011, p. 5).

### **Sociocultural Implications of Multimodal Code-Switching**

Follow-up research can also consider the sociocultural impact of code-switching in online interaction, for example, how it renders identity, community, and relations of power. Studies, for example, can explore how code-switching is vulnerable to the formation of transnational or diasporic identities and how it renders solidarity or resistance for subordinate groups (Li, 2018, p. 10; Zentella, 1997, p. 45). In addition, follow-up studies could explore the contribution of code-switching to language maintenance and shift in multilingual communities. For instance, what is the impact of social media code-switching on minority language vitality or global language spread like English? Addressing such questions would produce important insights

into communication sociolinguistics in the digital world and inform actions to promote linguistic diversity and inclusion (Pennycook, 2007, p. 25).

## CONCLUSION

This study has analyzed the pragmatic functions of code-switching in multilingual online social interactions, shedding light on the motivations, practices, and implications of language switching in virtual spaces. With the combination of qualitative and quantitative approaches, the study has identified significant trends and patterns in code-switching practice, showing how they are utilized to signal identity, solidarity, and power negotiation (Gumperz, 1982, p. 59; Myers-Scotton, 1993, p. 4). The findings also underline the function of digital affordances, such as hashtags, emojis, and word length, to limit code-switching practice (Androutsopoulos, 2015, p. 187; Paolillo, 2011, p. 285). The study has implications that extend beyond the theoretical, with practical implications for software developers, policymakers, and educators. By highlighting the functionality of code-switching as a tool for developing multilingual competence and culture awareness, the study calls for more inclusive and dialogic language pedagogy (Tagg, 2015, p. 45). It also emphasizes policies and technologies that are supportive of multilingual communication on the internet, such that social media sites are accessible and inclusive to multilingual users (Zappavigna, 2012, p. 120).

Despite its limitations, the study is a good foundation for future research on code-switching in new media communication. Through the expansion of the scope of analysis, the incorporation of multimodal analysis, and the examination of the sociocultural impact of code-switching, further studies can gain from the finding of this study and contribute more comprehensive knowledge on multilingual practices in the age of the internet. As digital communication progresses, more studies on code-switching will be necessary to enhance linguistic diversity, inclusivity, and innovation in international communication.

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