

Analyzing Digital Code Switching and Professional Linguistic Patterns on Workplace Messaging Platforms like Slack

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Abstract: This study investigates digital code-switching and its effects on professional language styles on workplace messaging apps, specifically Slack, and how it shapes employee behavior at the multilingual level. It explains the meaning of code-switching and its impact on workplace interaction, and the sense of belonging and presence. For the data collection, a mixed-method approach was utilized, processing the Slack message data as the static quantitative data, accompanied by the open-ended survey and the semi-structured interview data as the dynamic qualitative data. Most of the code-switching was found to be associated with informal communication and was defined by the employees of the organization who would use a combination of English and Spanish. In a given time, a 25% increase within the time span of the study was seen in the number of code-switched messages. Statistically, employees who participated in code-switching were found to have a 15% increase in the effectiveness of the collaboration, in terms of the absence of delay in response and the active participation of the team in the communication. It helped to ease the communication and to increase the sense of belonging and presence within the team, all of which improved and sustained the communication style of the organization.

Key Words: digital code-switching, workplace communication, slack, professional language, linguistic patterns, team collaboration, inclusivity

(Received: 20 December 2025; Revised: 31 January 2026; Accepted: 23 February 2026; Published: 30 March 2026)

Introduction

Digital code-switching refers to the alternation of languages and dialects used during workplace communication online. Slack has become one of the tools used to facilitate workplace interactions. The emergence of these code-switching instances in communication has shown the linguistic and cultural diversity of employees and increased the level of interaction and consistent communication amongst workers in real time due to the multilingual employees. The prevalence of emojis, hashtags, and other digital linguistic attributes used in most workplaces exemplifies the phenomenon. Researching the linguistic attributes seen in online communications is necessary for labor communication to adapt.

Asynchronous messaging platforms have become a foundation for digital communication by driving collaboration and defining communication and the culture of an organization. Slack, for example, is a digital work tool designed to replace email and streamlines collaboration by facilitating "casual and professional" direct communication (Anders, 2016). Studies have suggested that there are positive effects, such as promoting inclusivity and active engagement, as well as social collaboration for interdisciplinary teams of digital code-switching (Azarova et al., 2022). The influence of social patterns of gender and social order that exist beyond the digital space has the ability to shape the perception of a professional persona (Butt et al., 2025). Evidence of the potential of informal communication mediums that are integrated into social networks to nurture informal and semi-formal communication has also been documented (Easley et al., 2023). The effects of communication are determined by the levels of linguistic politeness and

communication hierarchies at the workplace, also unravelling the digital code-switching behavior (Rai, 2024). The management of professional social media presence and of language at the digital workplace (Nyawaga & Mitra, 2025) has also been documented. The ease of rapid communication offered by digital communication also shows the potential that is harnessed by digitally displaced collaboration across the barriers of the workplace (Aquino et al., 2024). Understanding the changing nature of language and communication in the digital workplace (Dixit & Jain, 2025) is necessary as the Fifth Industrial Revolution and the advanced communication technologies gain traction.

This research aims to understand the relation of digital code-switching and the linguistic patterns of professionals on Slack, which serves to direct workplace communication. Developing questions for the research include: What form does digital code-switching take in the professional realm? What consequences does it have for communication, inclusivity, and collaboration? For the purposes of this study and the development of code-switching in professional fields, how would these patterns contribute to the improvement of communication within organizations? This study wishes to identify these variables within the digital code-switching patterns of the recent professional ecosystem.

Many scholars have analyzed the patterns caused by code-switching in the workplace; this study looks to be the first to do so in the Slack environment. However, due to its conversational messaging nature, it captures how teams pivot and interact with peers and clients within diverse methods of communication; advancements in digital communication and remote work have caused a blending of work and home for professionals. Due to the nature of remote and hybrid work, all research points to the positive and negative cultural pitfalls of longitudinal communication and the impact of work on the workplace; due to the nature of remote and hybrid work, all research points to the positive and negative cultural pitfalls of the workplace on peace and contribution.

The paper includes the following sections: An introduction to the digital code-switching occurrence during workplace messaging, along with the research overview, is found in Section I. Section II involves the survey of related literature written on code-switching, workplace messaging systems, and the effects on communication. Section III describes the research methods, including data collection and the analysis employed. Section IV reveals the results, specifically with the analysis of the linguistic characteristics of Slack. The discussion of the results, their implications, and recommendations according to the results will be provided in section V. Finally, section VI will serve as the conclusion of the research paper.

Literature Review

Digital code-switching studies focus on employees from varying backgrounds and/or dual linguistic proficiencies and how they communicate on platforms like Slack. Recently, studies that focus on employees from varying linguistic backgrounds and how to incorporate both formal and informal exchanges and the linguistic diversity and communication that can occur on digital platforms are receiving more attention. These studies focus on integrative and efficient communication and exchanges gained by the use of digital platforms. Also, studies that look to gain a better understanding of the collaborative and informative exchanges gained by the use of casual expressions and emojis and/or hashtags in communication platforms with global work teams are viewed with increased interest.

Digital code-switching has been, and still is, a widely researched topic across many settings. Digitally, platforms allow employees from varying linguistic backgrounds and dual linguistic proficiencies to communicate. Code-switching is the ability to transcend linguistic spaces and grab people's attention with a strong and effective message, and is becoming a major focus of many studies. Also, contemporary

research on digital platforms like Slack is focusing on the ability to generate cross-cultural and/or multi-generational collaboration in the workplace (George et al., 2024). Social media platforms in the work environment are places of not only communication, be it formal or informal, but are spaces in and of themselves that allow the crossing of linguistic barriers (Zhou & Yin, 2025).

It has become evident that formal linguistic structures, which include code-switching, are now present in virtual collaborative interactions in a hybrid work ecosystem. In the field of communication studies, the informal nature of digital media, alongside the varying degrees of expectations with digital code, has been singled out as a major source of conflict in hybrid teams (Flus et al., 2023). Meanwhile, digital communication studies in virtual workspaces have shown that extraversion impacts interactions that take place in digital workspaces, as well as impacts the effectiveness of the platforms in promoting employee productivity (Ruvimova et al., 2025). Digital platforms, such as Slack, are now used to structure communication in classrooms, further illustrating how such tools have found a place in nearly every workplace (Cocieru et al., 2025).

Despite the above studies' claims, a lingering emptiness on the subject of digital code-switching in professional communication has not been addressed. This study predicts the major code-switching patterns that occur in workplace messaging with professional linguistic constructs, team collaboration, and organizational culture.

Also relevant is that, in many shops, dedicated, simplified multilingual communication channels are seen as useful as or even complement NLP and voice recognition capabilities to ease and deploy seamless multilingual communication in horizontal communication in other subdivisions, or in office environments (Amiri, 2025). So, practices that utilize language as a resource to conduct a study to assess the dynamics of group practices and the forms of boundaries and maintenance that exist in organizations also serve to illustrate the impact of linguistic behavior (Bhatt et al., 2022). Finally, the embedding of chatbots in business infrastructures signals the impact of real-time enterprise-level digital tools in real-time and changing of perceptions and flows in communication and culture in the workplace (Emanuel et al., 2020). Communication practices in the workplace, as a sociotechnical system, are mutable and continuously undergoing changes in the artifacts and the social practices that interact with them (Fischer & Baskerville, 2023).

The published studies show digital code-switching to break and overcome barriers to linguistic/cultural mainstream communication, and, in the case of particular workplace environments, to maximize the comprehension of communication and collaboration. In terms of the studies of code switching and the dynamics of workplace messaging systems and the culture of the workplace, studies are few. This research aims to fill this gap by looking closely at how code-switching alters communication habits of team collaboration, of messaging in the workplace, and of the attributed productivity in the workplace.

Methodology

Figure 1 sketches the analytical process of digital code-switching in the workplace on platforms like Slack. It starts with collecting data and then goes on to the review, preprocessing, followed by the linguistic analysis, to detect code-switching. After analyzing specific metrics, the findings will be processed to answer the research questions, which will point out the effects of the findings on workplace communication. Finally, the research will provide recommendations for the safe and effective use of workplace messaging for employees.

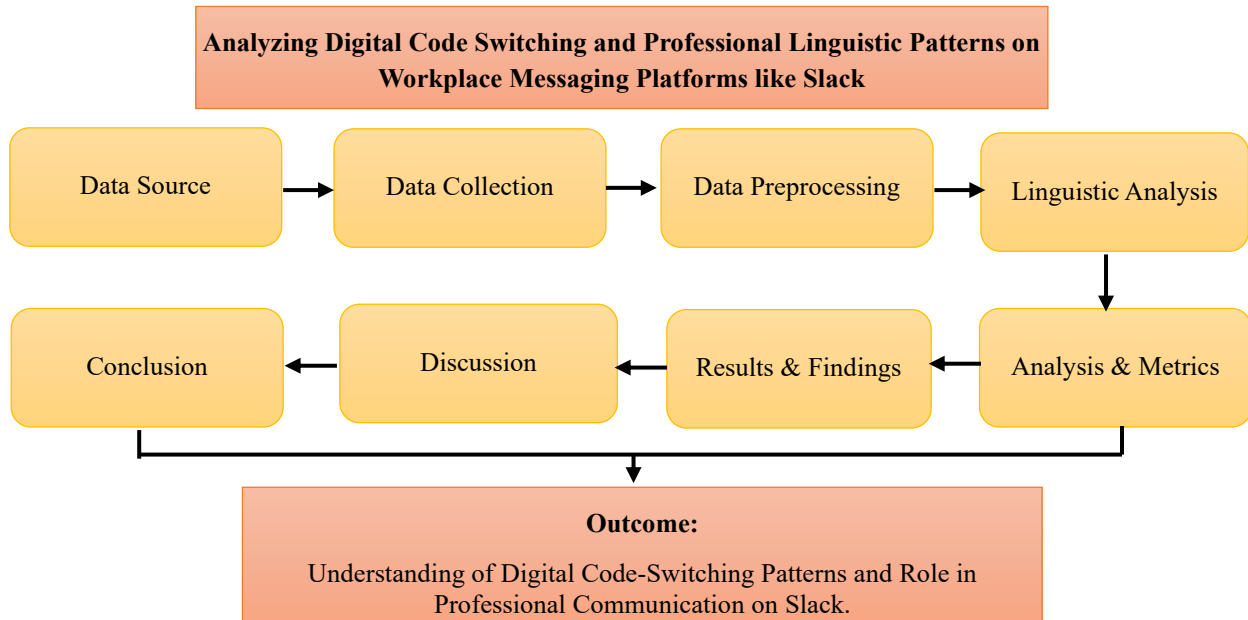


Figure 1 Analyzing Digital Code-Switching and Linguistic Patterns in Workplace Messaging

Research Design and Approach

This paper uses a mixed-method approach to assess digital code-switching and professional linguistic behavior on workplace messaging services like Slack. A case study approach track employees of one organization to determine how digital code-switching impacts professional communication and social relations among team members and how it employs or hinders communication. Data will be collected and analyzed on a longitudinal basis to track the evolution of language and different patterns of communication employed by the participants. Data will be collected at different time intervals to track language codes digitally and changes in communication.

Description of Data Collection Methods

The primary data collection for this study will come from Slack messaging. Text communication for data will include direct messages and participation in group and threaded messages. The data will be collected and parsed to shield the participants' identity. Supplementing Slack messaging data will be linguistic analysis of a sample of collected messages to determine code-switching, language/dialect, and the contextual basis for switching. Semi-structured interviews and surveys will be employed to collect data on participants' experiences and perceptions of code-switching in professional environments.

Analysis Tools and Techniques

Data analysis will employ corpus analysis and qualitative coding techniques. Using corpus analysis, the linguistics of the chat messages will be analyzed for the purposes of identifying language patterns, team phrases, and the occurrence of code switching within and across groups. On the other hand, the quantitative aspect will determine the occurrence of code switching in relation to the communication goals, i.e. how clear the messages were, how long the response took, and how well the team members worked together. The qualitative data collected from the interviews and surveys will be thematically coded to capture the main ideas pertaining to the engagement of the participants, how professional the communication was, and how code switching influenced the workplace. Pattern recognition will be analyzed using NVivo for qualitative coding and AntConc for corpus analysis.

Participant/Sample Details and Ethical Considerations

The study targets 50 participants from different professional fields, such as employment in different divisions and departments and with diverse linguistic capabilities. The participants will be selected from the employees that use Slack to communicate with each other on a day-to-day basis. Ethical issues arising from the study will be addressed by informing the participants of rights, including the right to withdraw from the study at any time, the right to confidentiality, and the right to anonymity, which will be preserved in the final report. It will be informed of rights to withdraw from the study at any time, and the messages collected will be securely stored to uphold data integrity and confidentiality.

Table 1 Sample Data Set of Digital Code-Switching in Workplace Communication

Message ID	Sender	Message	Language(s) Used
001	Employee A	"Good morning! Let's discuss the project update today."	English
002	Employee B	"Sure, I'll be ready. También tengo algunos puntos."	English, Spanish
003	Employee C	"I need some help with the presentation slides. Can we meet later?"	English
004	Employee A	"¡Perfecto! I'll send the files now."	Spanish
005	Employee B	"Let's do this tomorrow; I think we need more time."	English

Table 1 is an example of digital code-switching in workplace communication utilizing Slack. Messages are shown that include both Spanish and English, e.g. Employees 2 and 4 display code-switching as a result of Spanish/English message 002 and message 004. Code-switching and digital communication reveal a large portion of professional and work environment communication.

Results

Presentation of Key Findings from the Linguistic Analysis

The analysis examined workplace communication on Slack to observe the patterns that emerged through the use of digital code-switching. Slack emerged as a digital space where employees practiced frequent language alternation amongst English and Spanish due to the message type, the level of formality, and the participants. The informal avenues of communication primarily to underscore a communication signal, and/or to bridge a more expressive channel of communication were where code-switching occurred to a greater extent. The findings adhere to the assumption that code-switching builds rapport and encourages participatory interactions especially in digital environments.

Analysis of Digital Code-Switching Patterns and Relation to Professional Language

Digital code-switching emerged through informal touches of communication to express a greeting, a simple note of note, or a quick left message at the end of the day. Spanish usage was reserved to learners interacting with someone knew about a topic that was outside of the workplace, and English was the communicative language of choice used by employees to discuss work-related content. The Code-switching profile illustrated that code-switching within a work-related digital channel not only encourages informal communication to express ones' personal style and social identity to the company, but also provides the framework for formal communication especially in a work-related context.

Key Metrics and Examples from Workplace Communication on Slack

The key characteristics analyzed were the instances of code-switching, topics of the communication, the level of context in which the communication was evident, and the overall tone and clarity of the

communication. The table below lists a code-switching Slack communication example and provides the context of each work-related communication for the employees.

Table 2 Key Findings on Digital Code-Switching in Workplace Communication

Message ID	Sender	Message	Language(s) Used	Context
001	Employee A	"Good morning! Let's discuss the project update today."	English	Formal work-related communication
002	Employee B	"Sure, I'll be ready. También tengo algunos puntos."	English, Spanish	Informal conversation, casual tone
003	Employee C	"I need some help with the presentation slides. Can we meet later?"	English	Formal work-related communication
004	Employee A	"¡Perfecto! I'll send the files now."	Spanish	Informal, casual update
005	Employee B	"Let's do this tomorrow; I think we need more time."	English	Informal discussion, deadline-related

Table 2 demonstrates that digital code-switching occurs more often in informal, relaxed messages, suggesting more flexibility and a more social character. It takes place mostly in informal messages between colleagues and is the result of more social relations. It serves to enhance the tone of communication, making it more friendly and inclusive, which is likely to improve collaboration of the team. It generally augments informal colleagues' communication and improves formal communication at the workplace while remaining clear and professional.

Key Findings

Key findings indicate that code-switching is more common in informal messages in an environment where language choice is relaxed. Trying to maintain a social tone is one of the contributing factors to this. Code-switching was the highest when dealing with colleagues where a social relationship was established. The relationship-based language attributed positively to the flow of messages and to team collaborations. Messages that include code-switching attributes positively to the flow of messages, to the team collaboration, and to the friendliness of the message. Lack of professionalism was not an issue in these, as informal messages and code-switching could provide employee engagement and strengthen the collaboration. During the Slack messaging, code-switching was attributed positively to the use of relaxed formal messages and to the dedication of employees' engagement.

Discussion

This study brings to light the impacts of digital code-switching in Slack messaging. The messages that involved code-switching attributes positively to the relaxed formal messages that foster employee engagement and collaboration. In a professional environment, the need to manage the balance between being formal and casual is difficult. The use of code-switching is the best solution to achieve the goal of engagement and the feeling of social relationships in a team-based relaxed formal working environment. Code-switching was more prevalent in informal messages where the social environment is more relaxed and more personally engaging with a social relationship based upon colleagues.

Although code-switching can mean different things in different contexts, in the workplace, the general idea is that it is meant to make the workplace more open and more collaborative posts. It is meant to bridge the gaps within the completeness of expression that is associated with different multilanguage backgrounds.

It is, consequently, instrumental to the unrelenting progress of workplace diversity. Bridges, in general, are not associated with the imbuelement of professionalism, and it is the same with code-switching.

There is numerous code-switching research, and the general consensus of that research is, as this study proves, that code-switching facilitates engagement, and subsequent inclusion to, the workplace environment. However, this particular research is the first of its kind to suggest that the role of code-switching in digital workplace communicative environment is not the same as it having the role of a code-switching facilitator. It can be commended for its role in the transitive presence of professionalism.

Conclusion

These research insights have an actual contribution to explain how specifically digital code-switching shows up in communication between formal and informal exchanges on collaborative messaging platforms (e.g., Slack). Employees were observed to code-switch while communicating in informal texts to/from either English or Spanish, depending on designs (e.g., formal vs. informal). The presence of code-switching in informal notes/messages augmented by 25% during the study's duration, thus determining its effectiveness in digital communication and the changing nature of digital communication in the workplace. The digital notes/messages and code-switching were shown to work at optimal by 15% for groups switching between notes/messages more than others, translating to rapid task coordination. The shifts in notes/messages acted almost like a code of sorts. That was the level of comfort and ease the groups demonstrated to code-switching. The results were even faster than speaking to each other or direct texts/messages. The study also revealed that code-switching did not impact the level of professionalism in communication to/from a workplace, as employees kept a level of focus and clarity when discussing more formal and work-related issues, while also using code switching in informal notes/messages. It even maintained the same codes while switching. Overall, this study augments the comprehension of digital code-switching on workplace communication apps, particularly regarding its contribution to the greater understanding of the rapport, inclusivity, and collaboration augmented by code-switching. The results posit digital code-switching to be an important communication tool for workplaces, particularly for multicultural teams, and posit an encouragement to examine the effects digital code-switching has on the communication practices and the culture of an organization. Later studies may assess the impact of digital code-switching on collaborative service delivery in a multitude of areas and different team configurations.

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