

An Examination of EFL Undergraduates' Writing Error Types and Frequency in WhatsApp Chat Messaging: Exploring Key Factors

Mohammad Owais Khan ¹, Mohd Nazim ² and Ali Abbas Falah Alzubi ³

^{1,2,3} Department of English, College of Languages and Translation, Najran University, Najran, Kingdom of Saudi Arabia.

Corresponding author: e-mail: aliyarmouk2004@gmail.com

ABSTRACT: English as a Foreign Language (EFL) undergraduates' writing has consistently attracted the attention of educational stakeholders, notably teachers. Studies have been conducted to address writing challenges in various contexts, including social media platforms. However, rare research is available to examine the specific types and frequency of writing errors committed by EFL undergraduates while using WhatsApp, particularly in the context of Najran University. Therefore, the current study aimed to examine the types of errors and their frequency that EFL students commit in WhatsApp chat messages. Following a descriptive research design, this study used WhatsApp chat messaging samples and conducted semi-structured interviews with a sample of 40 English undergraduates. The content analysis of students' chat messages on WhatsApp indicated errors in spelling, verb tense, capitalization, noun number, and punctuation. Among these, the most frequent error was spelling. Additionally, the analysis of semi-structured interviews identified factors responsible for these errors, including excessive dependence on abbreviations and shortcuts, lack of familiarity with formal and informal communication, inadequate attention to grammar standards, limited exposure and practice with English language writing conventions, unfamiliarity with the formatting choices in WhatsApp, and interruptions from notifications and other conversations. Based on the findings, suggestions and recommendations are presented to address the writing issues of EFL undergraduates.

Keywords: EFL Undergraduates, Writing Error Types and Frequency, WhatsApp Chat Messages.

I. INTRODUCTION

Writing is an essential but challenging skill in the context of EFL learning and teaching. Scholars argue that writing is a skill that requires effort and motivation to acquire, especially for EFL learners, as it does not come naturally to them as speaking does. According to Nunan [1], writing requires meticulous progression that extends beyond natural language acquisition, requiring explicit instruction, continuous practice, and a supportive learning environment. In addition, Asmuti [2] argues that writing empowers individuals to structure their thoughts cohesively and articulate them fluently. To attain fluency in writing, language learners must expand their vocabulary, grasp idiomatic expressions, and comprehend the nuances of grammar. Scholars also identify the best instructional strategies, including the integration of information technology and social media platforms, to create a climate that motivates students to improve their writing skills [3-13]. Consequently, writing pedagogy in EFL contexts has garnered a lot of scholarly attention, including debates and discussions on the effectiveness of using digital platforms like WhatsApp for teaching, especially in terms of how well they affect writing instruction and learning quality [14-19]. Research findings indicate that EFL students often struggle to demonstrate their writing skills due to various challenges [20-25].

Writing proficiency is crucial in EFL settings, and Arab students struggle due to fear of mistakes and limited writing opportunities. Technology, like WhatsApp, can facilitate the writing abilities of EFL learners but also complicates writing, raising concerns about casual language and auto-correction. Hence, educators must understand these challenges to improve teaching and help EFL learners develop writing skills. In an EFL context, teaching writing should strike a balance between language acquisition and the development of writing abilities, with an emphasis on the requirements of the learner and the efficient application of scaffolding strategies to promote student growth. Scholars have argued that teaching writing in EFL contexts differs from ESL contexts [26-28]. These variations can be ascribed to a variety of factors, including organizational requirements, context-specific necessities, distinct student demands, and curriculum and instructional objectives [28-29]. Despite the differences between ESL and EFL environments, it is important to consider L2 writing training. According to Nunan [1], preposition errors are a common writing factor for students, and beginning writers often struggle

with spelling. He claims that spelling is a crucial component of writing and notes that ESL students often omit or add characters, misspell words based on their phonemes, and struggle with irregularities in English spelling. Grammatical errors are often produced by students through L1 impact. Anxiety is brought on by EFL students' inability to use grammatically sound sentences.

Information and communication technology (ICT) has a significant impact on the educational sector. One constructive response to the growth of ICT in the twenty-first century is its use in language teaching and learning [30]. Social media has emerged as a significant trend in ICT, referring to interconnected tools that enable individuals to connect, engage, and share ideas and interests [31]. This has allowed teachers and students to engage and work together in new ways.

The use of mobile devices is a rapidly growing area of study in language teaching and learning. Students can access a variety of mobile applications through their phones. Numerous mobile apps and websites, such as WhatsApp, Facebook, Twitter, Telegram, Instagram, and YouTube, are used to teach foreign languages. Short Message Service (SMS) messaging was the main method of text-only communication between mobile phones before the rapid growth of mobile technology and mobile applications. SMS is a widely used two-way communication feature, and it is arguably the most popular mobile technology among students in higher education [32]. Since its inception, SMS messaging has provided students with access to crucial information and a platform for support groups and teamwork. WhatsApp is a program that can enhance the learning process. Through WhatsApp, teachers and students can communicate virtually. WhatsApp can enhance students' writing abilities while completing online coursework, as it requires critical thinking to express their views. It is a useful application for students to write and explore their thoughts.

The use of WhatsApp by EFL students impacts their writing abilities because they make mistakes and often disregard them. This practice is becoming more common among EFL students, leading to issues with their academic writing. Messaging, or textism, is a trend where internet users alter Standard English by using abbreviations, adapting terminology, omitting unnecessary letters, and replacing words with similar sounds, as well as capitalizing words [33]. According to a study by Handayani and Aminatun [34], texting on multimedia applications like WhatsApp or Facebook, known as SMS, does not adhere to the rules of formal English writing, grammar, or word spelling. The language used in electronic interactions is intentionally designed to be understood by users in the same context, which contributes to this phenomenon.

Technological advancements are an integral part of our daily lives and are particularly prevalent among the younger generation. The widespread use of technology can have negative effects on their writing skills. Alhusban's [35] study supports the idea that the use of advanced technology negatively impacts students' writing abilities. Students often distort the meaning of the English language and overly rely on technology to correct all their writing mistakes. This reliance has led to the emergence of new linguistic forms known as "textism," where people disregard normal English syntax and employ shortened or combined vocabulary with letters or symbols. Additionally, students tend to underestimate the importance of writing, editing, revising, and rewriting, preferring to write in short bursts and with shortcuts. Consequently, they often fail to check their assignments for sentence structure and grammatical errors [36]. WhatsApp features that assist in writing texts can sometimes contribute to writing errors. For example, auto-correction, predictive text, and spelling checkers may lead to errors. Factors such as small screens, multiple language keyboards, and a lack of proofreading also contribute to errors in writing on WhatsApp. Alsaleem [37] examined the impact of electronic communication through WhatsApp on the writing proficiency of EFL undergraduate Saudi students, focusing on vocabulary, word choice, and voice, which are essential factors contributing to errors by the users.

The purpose of this study is to investigate how EFL students use WhatsApp as a learning tool for writing. It aims to determine the types and frequency of writing errors made in this informal digital setting, as well as to explore the underlying causes of these errors. By analyzing these dynamics, the research aims to determine whether digital platforms like WhatsApp have a negative impact on EFL writing skills. Hence, the study objectives are formulated to:

- discover the type of errors and their frequency committed by EFL undergraduates while engaging in WhatsApp chat messaging.
- determine factors responsible for committing writing errors in terms of spelling, verb tense, capitalization, noun number, and punctuation errors.

II. LITERATURE REVIEW

Research on WhatsApp-mediated communication has shown that while it provides a convenient platform for virtual interaction, it also introduces challenges like spelling errors and the informalization of language [38]. Studies have found that the informality of digital interactions, such as the use of abbreviations and adaptations of terminology, may hinder the development of formal writing skills [39-42]. Scholars argue that the overreliance

on technology to correct mistakes and the emergence of "textism" suggest a potential loss of formal writing conventions, posing significant challenges to EFL students' academic success. Additionally, the literature review explores the use of WhatsApp communication to improve writing skills in EFL students [43-44].

On one hand, studies have shown that WhatsApp can enhance vocabulary development, word choice, motivation, and collaborative learning. Fattah [45] conducted a study on the usefulness of using WhatsApp Messenger as one of the learning approaches to improve students' writing skills. The WhatsApp technique had a considerable impact on students' writing abilities, according to the results of the t-test analysis, which showed that the experimental group outperformed the control group. Additionally, Wahyuni and Febianti [46] investigated the use of WhatsApp to improve students' writing abilities through MALL. The findings demonstrated that MALL is an effective teaching method for enhancing students' writing abilities via WhatsApp. Siregar et al. [47] also investigated the usage of WhatsApp applications to correct students' writing faults, revealing four primary categories of writing errors: omissions, additions, misinformation, and sequencing errors. The findings anticipate that students will engage in more practice and enhance their writing proficiency, particularly in recounting texts. Similarly, Rokhmah [48] used telecollaboration on Facebook and WhatsApp to investigate pupils' writing abilities, demonstrating that WhatsApp is a suitable learning tool for students, particularly to improve their language learning. Furthermore, Rosalinda et al. [49] investigated how students perceive writing lessons while using WhatsApp, finding that students are enthusiastic and engaged in utilizing WhatsApp to learn writing. Nedal [50] discovered a substantial difference between the pretest and posttest writing scores of the journaling participants in his study, with statistically significant improvements observed in language choice and voice, two essential writing qualities. Maria [51] found that using WhatsApp helps to motivate students to improve their writing skills, and nearly all students have access to the internet on their phones, making it a compelling tool for second language learning. Linda [52] conducted research on the use of WhatsApp Messenger as a mobile tool for writing instruction in EFL classrooms, finding that students are drawn to WhatsApp Messenger and have positive opinions about using the app. Ahmed [53] explored WhatsApp's pedagogical function as one of the mobile-assisted language learning tools for improving Yemeni EFL learners' motivation levels in terms of their ability to read and write, with results showing that WhatsApp was a highly useful tool for encouraging learners to get better at reading and writing. Allagui [19] examined the usefulness of WhatsApp instant messaging for undergraduate students in higher education, displaying the students' skills and weaknesses, with outcomes indicating that students were more motivated to write when WhatsApp was used in the classroom. According to Saputra et al. [54], WhatsApp's user-friendly features allow students to receive vital feedback on social media, helping them practice comprehensive English writing abilities by allowing them to write and update their status. Research Gate, Science Direct, e-Perpusnas, and Google Scholar were the sources of the data. The WhatsApp daily status of students is prone to errors due to both intra-lingual and inter-lingual issues. Therefore, by providing accurate and sufficient information in English, students can lessen or completely prevent making mistakes in sentence construction.

Moreover, studies on EFL students' writing have dominated the research world, particularly regarding writing problems and how to address them by integrating technology through social networking sites, including WhatsApp. The literature indicates that the advancement of technology, notably the abundant presence of smartphones and various applications such as WhatsApp, Facebook, and Telegram, has captured the interest of numerous scholars regarding its adverse effects and challenges on student writing. These challenges include insufficient feedback, difficulties in responding to teacher queries, and potential informal language use. Additionally, WhatsApp may lead to errors in writing due to factors like spelling, verb tense, capitalization, noun number, and punctuation.

The current investigation aims to identify the types and frequency of errors made by EFL undergraduates in WhatsApp-based writing tasks and to identify factors contributing to these errors. The findings may inform pedagogical practices to address writing errors and promote effective communication skills among EFL students in the digital age. Scholars have identified a limitation of WhatsApp in that it does not facilitate direct responses from students. This means that students are unable to engage in real-time interaction or provide immediate feedback to teachers when receiving instructional materials [55]. In addition, Siregar et al. [47] investigated WhatsApp's potential as a flexible teaching tool for a range of subjects, including speaking, reading, and other subjects commonly taught in schools. It deviated from conventional methods, though, by putting all of the emphasis on students' writing abilities through WhatsApp messaging rather than grammar and vocabulary. Despite this strategy, students voiced doubts about WhatsApp's ability to improve writing abilities, pointing out what they saw as the app's perceived shortcomings when it came to vocabulary and grammar. Furthermore, Ong and Abd Karim [56] maintains that students encounter challenges when attempting to complete writing lessons on WhatsApp.

Previous studies on WhatsApp-mediated chat assignments on EFL students' writing abilities reveal several research gaps. These include exploring specific linguistic features contributing to writing errors, examining the

impact on higher-order writing skills like critical thinking and argumentation, and researching effective pedagogical strategies for integrating WhatsApp into EFL writing instruction. Additionally, there is a lack of guidance on how to mitigate the negative effects of textism and technological reliance. Filling in these research gaps, this study intends to shape the creation of evidence-based educational approaches for the digital era and offer insightful information about the potential of WhatsApp chat messaging as a tool for improving EFL students' writing proficiency. Therefore, by elaborating on these research questions, the current study endeavors to offer a nuanced exploration of the complex dynamics surrounding writing error types and frequencies within the realm of WhatsApp chat messaging among EFL undergraduates. This expanded focus intends to provide valuable insights for educators, curriculum developers, and researchers seeking to optimize the use of technology in language learning contexts and enhance students' writing skills effectively. Accordingly, the study's objectives are reformulated to address the following research questions:

- What are the types of errors and their frequency committed by EFL undergraduates while completing WhatsApp chat messaging?
- What are the factors responsible for committing writing errors in terms of spelling, verb tense, capitalization, noun number, and punctuation errors?

III. METHODS

The study aimed to describe EFL undergraduates' writing error types and their frequency in WhatsApp chat messaging in addition to exploring key factors responsible for these errors. Therefore, the descriptive research design was followed where the researchers attempted to describe the problem, as it exists in reality. Figure 1 displays the framework of the study's research design.

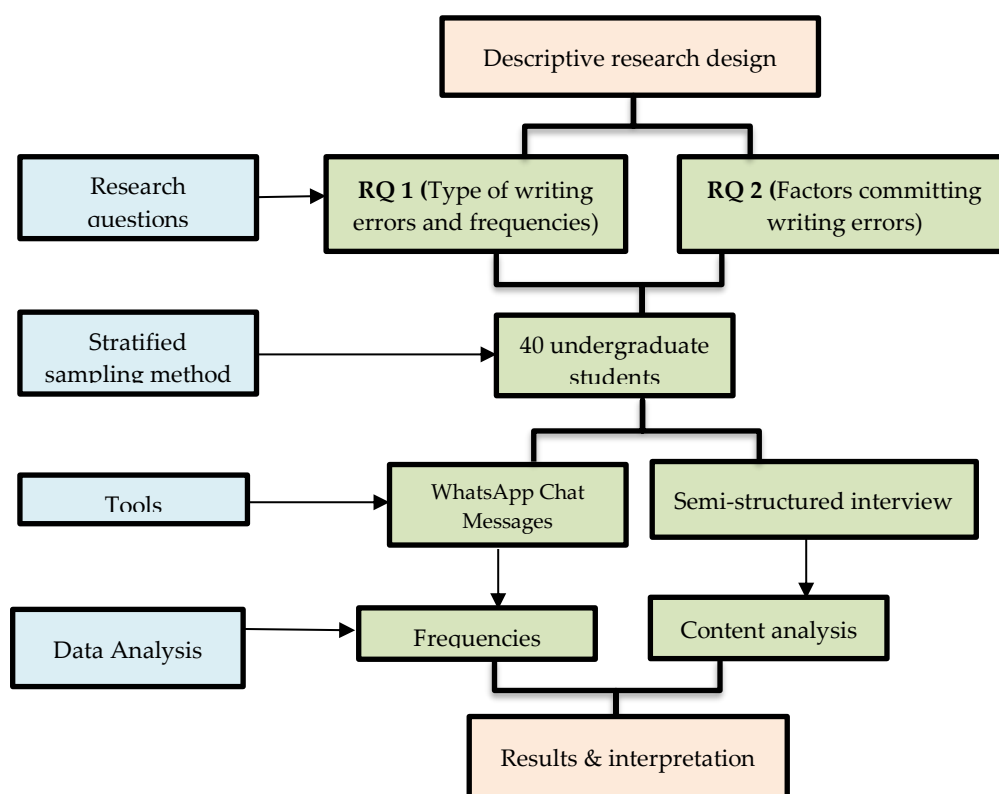


FIGURE 1. Research design

1. POPULATION AND SAMPLE OF THE STUDY

The researchers recruited 40 undergraduate students (all Arabic-speaking) enrolled in academic writing, level one, using a stratified sampling method during the academic year 2022–23 at the Department of English, College of Languages and Translation, Najran University, Najran. The participants were enrolled in a course on academic writing skills. The researchers ensured homogeneity by selecting participants from the English department who were registered for the same course at the same academic level. The participants' ages ranged from 18 to 25.

Homogeneity refers to the degree of uniformity across sample units within a population, with all items in the sample chosen because they had similar or shared features. The rationale behind selecting 40 undergraduate students is supported by factors such as representation, feasibility, stratified sampling, suitability for analysis, and congruence with prior findings. This sample size ensures the validity and reliability of the findings while enabling the researchers to successfully accomplish the study's goals.

2. *ETHICAL APPROVAL AND INFORMED CONSENT*

The study has been approved by the Ethics Committee at the Deanship of Scientific Research at Najran University with the code (NU/RG/SEHRC/12/41). Also, the participants' signed consent letter was collected.

3. *TOOLS OF THE STUDY*

The researchers employed WhatsApp chat messaging samples to discover the types of writing errors and their frequency, as well as semi-structured interviews to explore the key factors responsible for these errors. WhatsApp chat messaging samples allow researchers to observe writing errors in real-time, providing rich data for analysis. This informal nature allows for a more naturalistic representation of errors compared to formal tasks. Semi-structured interviews provide an in-depth exploration of factors contributing to writing errors, allowing researchers to probe participants' experiences and attitudes. The flexible format allows for a comprehensive exploration of key factors related to writing errors. Engaging directly with EFL undergraduates through interviews enhances interpretability and supports practical recommendations. WhatsApp chat messaging samples and semi-structured interviews are used to identify writing errors among EFL undergraduates. These assignments allow direct observation and documentation of errors in a naturalistic setting, while interviews explore key factors like language proficiency, writing strategies, socio-cultural influences, and technological affordances, providing a comprehensive approach. The researchers used WhatsApp chat messages as assignments. The messages are communicative chats sent back and forth in the form of text. These messages can also include images, videos, audio, and other files. The app allows people, communities, and groups to connect in real-time using an internet connection [57]. A semi-structured interview is a generally applied qualitative method of research in the social sciences. It is a formal interaction between two individuals accompanied by a strict set of questions that prevent the interviewee from diverting. It allows researchers to explore and discover ideas that arise from the interviewee's responses. In a semi-structured interview, participants often respond to a list of themes. The study's WhatsApp-mediated conversation assignments were qualitative by design, emphasizing participants' naturalistic language use in a digital communication setting. These tasks made it possible to investigate in-depth how language was used by students in text-based, real-time interactions, exposing subtleties in language usage and learning that might not be seen in typical classroom settings. Free expression of views, ideas, and questions was encouraged among participants, emulating real-world communication situations that students could encounter outside of an academic setting. As the study proceeded, a methodical analysis was conducted on the qualitative data obtained from these conversation assignments, producing quantitative data in the form of frequencies and percentages. The study gave a numerical dimension to the qualitative experiences of the participants by counting the frequency of specific error types and calculated these as percentages of the total errors made. This approach allows for a more nuanced investigation of how digital platforms such as WhatsApp can affect EFL students' writing skills and competency within a social media setting.

4. *VALIDITY AND RELIABILITY*

To ensure the validity and reliability of using WhatsApp chat messaging samples and semi-structured interviews in research, several strategies were employed. For WhatsApp chat messaging samples, content validity was ensured by selecting messages that are relevant to the research question and represent a diverse range of writing errors. Construct validity was confirmed by aligning identified errors with established writing error categories. To establish reliability, inter-rater reliability was assessed by having multiple raters independently analyze a subset of messages, while intra-rater reliability was tested by ensuring consistent identification and categorization of errors by a single rater across different analysis instances. For semi-structured interviews, validity was enhanced through face validity, ensuring questions are clear and relevant, and content validity, by having questions reviewed by experts. Five experienced teachers in the field of integrating technology in language learning assessed the study tool if it can collect data that can answer study question number 3 and thus achieve its objectives. Based on their reviews, modifications related to wordiness, language, the study context, etc. were improved.

WhatsApp chat messaging prompts:

From:

❖ Vocabulary

- ❖ Sentences and Grammatical Structures
- ❖ Conversation

To:

- ❖ ESP Vocabulary
- ❖ Simple present and progressive tense
- ❖ Conversation (based on a communicative situation)

Interview question:

From:

- ❖ What are the writing problems students face while responding to their teachers using WhatsApp texts?

To:

- ❖ What are the key factors responsible for committing writing errors in terms of spelling, verb tense, capitalization, noun number, and punctuation errors?

Reliability was improved by training the interviewer to follow a consistent protocol, ensuring consistency in probing for detailed responses, and conducting peer debriefing to discuss and enhance consistency in data collection and interpretation.

IV. RESULTS

1. CONTENT ANALYSIS OF THE STUDENTS' WRITTEN CHATS

Table 1. Students' WhatsApp chat samples

Error Types	WhatsApp Chap Messaging Samples		
Spelling			
Verb Tense			
Capitalization			
Noun Number			
Punctuation			

As shown in Table 1, students' WhatsApp chat messages analysis reveals that EFL graduates commit numerous errors such as improper use of verb tense, missing punctuation marks like apostrophes and commas, and incorrect capitalization. In addition, the students make errors in multiple instances of spelling as indicated in the samples. Furthermore, the students make errors in noun numbers (-s or -es). The aforementioned discussions demonstrate that learners used to have English conversations on their own, without instruction from teachers. These chats have had the positive side effect of making them adore English. The researchers kept themselves away from the students' chats and only monitored their chats during this conversation. They were left free to speak their minds because the teacher was not a part of their conversation. Researchers looked at their writing mistakes and used them to determine what they needed. Their mistakes in the WhatsApp conversation could serve as the basis for our research data.

Table 2. Descriptive statistics of errors

Variables		Punctuation	Noun Number	Capitalization	Verb Tense	Spelling
N	Valid	40	40	40	40	40
	Missing	0	0	0	0	0
Mean		3.10	2.75	4.03	4.35	7.30
Std. Deviation		0.591	0.870	3.068	1.460	2.830
Minimum		2	2	1	3	3
Maximum		4	4	11	7	13
Sum		124	110	161	174	292

Table 2 illustrates the mean value of approximately 3.10, with a standard deviation of 0.591, indicating the degree of variability in this variable. The minimum and maximum values reflect the range of scores observed in this variable. Specifically, the average score for spelling is 7.30, with a standard deviation of 2.830, suggesting variability in spelling scores. The range between the minimum and maximum values highlights the extent of this variability. Conversely, the average score for noun numbers is 2.75, with a standard deviation of 0.870, indicating relatively low variability in noun number errors. The range between the minimum and maximum values suggests that students are more consistent in their use of noun numbers compared to other error types.

Table 3. Frequency of punctuation errors

Error Types	Number of Errors	Frequency	Percent	Rank
Punctuation Errors	2	5	12.5	3
	3	26	65.0	1
	4	9	22.5	2
	Total	40	100.0	
Noun Number Errors	2	21	52.5	1
	3	8	20.0	3
	4	11	27.5	2
	Total	40	100.0	
Capitalization Errors	1	9	22.5	2
	2	2	5.0	6
	3	15	37.5	1
	5	6	15.0	3
	6	3	7.5	5
	11	5	12.5	4
Verb Tense Errors	Total	40	100.0	
	3	15	37.5	1
	4	12	30.0	2
	5	3	7.5	5
	6	4	10.0	4
	7	6	15.0	3
Spelling Errors	Total	40	100.0	
	3	5	12.5	4
	5	6	15.0	3
	6	4	10.0	5
	7	11	27.5	1
	9	8	20.0	2
	11	2	5.0	7
	13	4	10.0	5
	Total	40	100.0	

Table 3 indicates that EFL undergraduates mostly commit errors in spelling, with the highest frequency at eleven (27.5%) and the lowest at two (5%). On the other hand, EFL undergraduates commit the fewest errors in noun numbers, with the highest frequency at 21 (52.5%) and the lowest at eight (20%). This suggests that EFL undergraduates struggle with correctly spelling words but have fewer difficulties with noun numbers. The frequencies of other error types fall between those of spelling and noun numbers.

2. CONTENT ANALYSIS OF THE STUDENTS' ACADEMIC WRITING ASSIGNMENTS

The semi-structured interview analysis revealed that EFL undergraduates' lack of knowledge about formal and informal English language conventions, especially on WhatsApp, is a key factor contributing to writing errors in spelling, verb tense, capitalization, noun number, and punctuation. Participants also attributed errors to dialect and casual language use, which affect grammar, capitalization, verb tense, spelling, and noun numbers. Limited exposure to English outside the classroom and their English education level hinder proper language use. WhatsApp's auto-correct features sometimes lead to unintended errors, compounded by the app's immediate responses and lack of proofreading time. Participants also cited unfamiliarity with the English keyboard and formatting options. Other factors included informality in communication, limited attention to grammar rules, transfer of native language rules, overreliance on shortcuts, inadequate language exposure, lack of proficiency in English, autocorrect errors, typing mistakes, inattention to detail, informal writing, unfamiliarity with WhatsApp formatting, limited proofreading time, distractions, and use of slang. Some of the excerpts are presented here:

S2: "I don't know much about formal or informal phrases used in communication. Also, I frequently communicate informally via WhatsApp, which contributes to a careless attitude toward English language conventions like punctuation, spelling, and other grammar rules."

S5: "I believe that most of the time students write informally, particularly on WhatsApp. As a result, there are mistakes in grammar, capitalization, verb tense, spelling, and noun number."

S6: "Dialect and casual language usage, in my opinion, are major factors in the mistakes we make when writing on WhatsApp. I use informal language most of the time, especially outside of class, which results in mistakes with spelling, verb tenses, capitalization, noun numbers, and punctuation."

S9: "Since we are in level 1, we have very little knowledge of spelling and grammar rules. Because we start studying English in school quite late and do not have much opportunity to practice, I do not have a strong command of English grammatical rules, which causes me to make mistakes with verb tenses, capitalization, spelling, and punctuation."

S11: "I am aware that one of the main factors of making mistakes when writing on WhatsApp is a poor command of English grammar and mechanics, particularly when it comes to spelling, verb tenses, capitalization, noun numbers, and punctuation."

S13: "My minimal exposure to English outside of the classroom, particularly in formal writing settings, makes it difficult for me to use proper language mechanics like capitalization, punctuation, verb tense, and spelling."

S18: "Despite its usefulness, WhatsApp's auto-correct features sometimes propose incorrect phrases or spelling based on past typing patterns. This can result in unintentional misspellings or incorrect verb tenses because of WhatsApp's inaccurate predictions."

S21: "Because WhatsApp encourages prompt responses, it demands less time to examine and proofread. We therefore ignore mistakes such as spelling, punctuation, capitalization, etc., before transmitting messages."

S27: "One of the main reasons I think students make mistakes like spelling, incorrect use of verbs, tense and sentence structure, capitalization, and punctuation when typing on WhatsApp, is the transfer or interference of Arabic rules."

S29: "When using WhatsApp, I frequently rely on shortcuts and abbreviations, which causes me to make spelling, capitalization, and punctuation errors."

S30: "One of the main factors I make mistakes when writing on WhatsApp, in my opinion, is being distracted by other chats and notifications. The errors which I and maybe other undergrads are spelling, inappropriate article usage, tense, capitalization, and punctuation."

S33: "My understanding is that one of the main factors of typing errors, such as improper punctuation, spelling, and capitalization, is unfamiliarity with the English keyboard."

S34: "One of the main reasons for writing errors on WhatsApp is not being aware of its formatting options. These writing mistakes include capitalization, punctuation, verb tense, noun number, and spelling."

S36: "Like most EFL undergraduates, I am more unlikely to pay attention to detail and likely to ignore writing problems that result in incorrect capitalization, spelling, punctuation, and other grammar faults in the informal and fast-paced context of WhatsApp use."

S39: "I rarely proofread before sending WhatsApp messages. I do not find time for proofreading. Due to these conditions, mistakes with capitalization, punctuation, noun number, spelling, and verb tense are made."

V. DISCUSSION

The content analysis of WhatsApp chat messaging samples revealed that EFL graduates commonly make errors in verb tense, punctuation, capitalization, spelling, and noun numbers. Among these, spelling errors were the most frequent, with an average score of 7.30, while noun number errors were the least common, with an average score of 2.75. This suggests that EFL undergraduates struggle more with spelling and noun numbers

compared to other error types. These findings may be attributed to EFL undergraduates' limited engagement with writing assignments and a lack of evaluation on subjective questions before university education. It is also possible that the informal nature of chat messaging on platforms like WhatsApp contributes to these errors, as students may not feel the need to adhere to formal language conventions. The researchers were unable to find previous studies that specifically examined the types and frequencies of errors in WhatsApp-mediated chat assignments among EFL undergraduates. This highlights the novelty and importance of the current study's findings in contributing to the understanding of language errors in digital communication contexts.

In addition, the content analysis of the semi-structured interviews revealed that EFL undergraduates' lack of knowledge about formal and informal English language conventions, particularly in the context of WhatsApp, is one of the main factors contributing to different types of errors. These errors include spelling, verb tense, capitalization, noun number, and punctuation. The low level of English proficiency among EFL undergraduates and their limited exposure to the language outside of the classroom were identified as significant contributors to these errors. Additionally, WhatsApp's auto-correct feature, which can lead to inadvertent misspellings or incorrect verb tenses, and their lack of proofreading time could also be contributing factors. The results of the qualitative analysis of the current study indicate that the overuse of acronyms and shortcuts, combined with a lack of knowledge about text editing tools, may potentially be another reason for these errors. The current study aligns with Siregar et al.'s [47] findings, highlighting WhatsApp's potential as a flexible teaching tool for various subjects. However, students question its effectiveness in improving writing skills due to alleged shortcomings in vocabulary and grammar guidance. Additionally, the study's findings align with Ong and Abd Karim [56], whose results indicate that students encounter challenges when attempting to complete writing lessons on WhatsApp. However, the findings disagree with Handayani and Aminatun [34], whose results demonstrate that utilizing the WhatsApp group to teach writing can have a positive impact and be advantageous for both the teaching and learning process, helping pupils improve their writing skills. Students' opinions, indicating more positive than negative reactions to this media, support this conclusion. Additionally, the outcome demonstrates that one of the suitable learning environments for Indonesian education is the WhatsApp group. However, this study's results contradict Rosalinda et al. [49], whose findings indicate that students' reactions to using WhatsApp to learn writing were positive. The study's findings further reveal that the learning activities conducted through WhatsApp and the use of the messaging app as a writing platform have piqued students' interest. Furthermore, the present research findings differ from those of Syarif and Zaim [58], whose results indicated that WhatsApp made it easier for students to improve their vocabulary, grammar, and writing abilities, giving them a platform for unrestricted English writing practice and communication by allowing them to observe and learn from the writing styles of their peers within the WhatsApp chat environment. As a result, the study concluded that WhatsApp, as a tool for mobile learning, gives students great chances to improve their language proficiency, especially in written communication. This research explores the factors influencing EFL writing proficiency among Arab students, including classroom instruction, fear of mistakes, and technology, particularly messaging platforms like WhatsApp. It also examines the impact of social media on writing skills, focusing on textism and formal writing conventions. The study also explores pedagogical strategies, addressing writing challenges, and improving writing instruction. The findings will contribute to evidence-based approaches to EFL writing instruction. In general, this research aims to deepen our understanding of EFL writing instruction and offer practical suggestions to curriculum creators, educators, and policymakers who want to help Arab EFL students become excellent writers in the digital era.

VI. CONCLUSION

This study aimed to examine the types and frequencies of errors, such as spelling, verb tense, capitalization, noun number, and punctuation, that EFL students commit during WhatsApp chats. The results revealed that spelling is one of the most frequent errors that EFL undergraduates make while using WhatsApp. Additionally, the content analysis of semi-structured interviews identified several factors responsible for these errors, including a lack of familiarity with formal and informal communication norms, excessive dependence on abbreviations and shortcuts, inadequate attention to grammar standards, limited exposure and practice with the English language, ignorance of formatting options in WhatsApp, and interruptions from notifications and other conversations. Based on the findings, the researchers, in agreement with the scholars [53, 45, 51, 54], suggest to:

- ⊙ activate WhatsApp's dictionary and spell-checker feature
- ⊙ use WhatsApp's available formatting options

- ⊙ carefully proofread the messages before hitting 'send'
- ⊙ consider the audience for your messages
- ⊙ familiarize yourself with English mechanics
- ⊙ expand the vocabulary by writing regularly
- ⊙ request the teachers to send you the feedback and corrections.

The results of this study demonstrate that integrating WhatsApp to identify the types of errors and their frequency, as well as the causes of these writing problems, is a worthwhile area of research, supporting the idea that WhatsApp is a rapid and easy tool to help EFL undergraduates with their writing. Teachers should encourage students to use technologies, such as WhatsApp, to improve their writing skills. Instructors need to modify their teaching methods by incorporating technology to make them more engaging. The study's findings might help teachers incorporate cutting-edge technology into EFL classrooms. However, when drawing generalizations from a study like this, where the only participants were students, care should be taken.

This study examines writing errors among EFL undergraduates using WhatsApp chats and the factors contributing to them. However, the study's limitations include a small sample size of 40 students from a single university, a lack of comparative analysis, self-reporting bias, and a limited scope. In addition, the study primarily focused on spelling, verb tense, capitalization, noun number, and punctuation errors but did not examine other aspects of writing proficiency, such as coherence, organization, and clarity. The findings may not be applicable to other educational contexts or student populations. Future research should address these limitations and use more robust methodologies to enhance the validity and generalizability of findings in EFL writing instruction. The researchers recommend future studies to compare the effectiveness of WhatsApp and other messaging platforms in developing EFL undergraduates' writing skills. Addressing errors in EFL students' WhatsApp chat messages can significantly improve their language skills and learning outcomes. By correcting spelling, verb tense, capitalization, noun number, and punctuation, students can develop a more accurate and fluent command of the English language, leading to improved communication skills in both spoken and written contexts. This increased confidence motivates students to engage more actively in language learning activities and take on more challenging tasks. Addressing errors in writing skills, such as spelling, punctuation, and grammar, can significantly enhance students' writing skills, leading to better academic performance. This also prepares students for real-world communication and fosters a culture of lifelong learning. Teachers can empower students to become more confident and proficient communicators in English.

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