



Strategies for Mitigating the Impact of WhatsApp Text-Based Interaction on Academic Writing Proficiency in Tanzanian University Students

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Abstract

This study examined strategies for mitigating the impact of WhatsApp text-based interactions on academic writing proficiency among Tanzanian university students. Data was gathered through an online questionnaire administered to 378 undergraduate students randomly selected from six colleges and three schools. In addition, the questionnaire was administered to 16 randomly selected instructors who taught Communication Skills and Development Studies courses. A total of 378 students' WhatsApp group chats and 108 written examination scripts were scrutinized to assess the impact. The quantitative data was analyzed using descriptive statistics while content analysis was used for qualitative data. The findings indicate that the use of WhatsApp text-based interactions has a negative impact on students' academic writing proficiency. The linguistic features of WhatsApp discourse, such as inappropriate capitalization, abbreviations, acronyms and initials, misspellings, inappropriate use of punctuation and omission and clippings, were found in students' academic writing. The study recommends various strategies for mitigating the impact of WhatsApp-mediated language on academic writing proficiency, including establishing academic writing centers to help students develop formal writing skills. The university should organize sensitization procedures to address the impact. Additionally, there is a need for regular evaluation and feedback through academic writing tests and assignments to improve students' writing performance and for incorporating academic writing practices into digital platforms, such as WhatsApp to provide real-time feedback.

Keywords: Strategies; WhatsApp text-based interactions; linguistic features; academic writing proficiency.

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Introduction

In the global context, social media, particularly WhatsApp, has become a ubiquitous communication tool among university students,

serving both social and academic purposes (Khan et al., 2024; Lee et al., 2023). According to Azizi et al. (2019), university students utilize social networking sites more than students of any other age group. In developed countries, social platforms including

WhatsApp are extensively used by students for academic and social interactions (Dean, 2024; Shabur & Siddiki, 2024; Lee et al., 2023; Mhlanga & Ndhlovu, 2023). The trend is similarly observed in African countries, where the rapid expansion of internet access and mobile technology has facilitated the widespread use of social media (Mojeed & Olaniyan, 2023; Mhlanga & Ndhlovu, 2023).

A study focusing on international distance education students found that 60% utilized WhatsApp as their primary social media platform (Madge, 2019; Mabaso et al., 2023). In Nigeria, for instance, WhatsApp is the most commonly used platform among students, with studies by Usman and Bukar (2022) showing that over 85% of university students use WhatsApp for both academic and non-academic communication. A study conducted at a South African university found that 97% of students reported being heavy users of WhatsApp, logging in several times per day for 3 to 5 hours (Mhlanga & Ndhlovu, 2023). Similarly, research among first-year students at a South African University of Technology reported the platform's extensive use for communication, content sharing and addressing academic-related issues (Makoza, 2022).

In sub-Saharan Africa (SSA), the adoption of social media among university students has been significantly driven by increased smartphone penetration and affordable internet packages (Tryphone et al., 2023; Daramola & Etim, 2022). Within the Southern African Development Community (SADC), countries like South Africa, Botswana and Zambia have experienced a surge in social media use among university students, with WhatsApp, Facebook and Telegram emerging as primary platforms for online engagement (Yu & Motlhabane, 2022). The East African region also exhibits a similar trend, with studies revealing that students in Tanzania, Kenya and Uganda frequently use WhatsApp for academic communication, collaborative learning and social networking (Kimani et al., 2023; Mutajwaa & Kivara, 2023; Rambe et al., 2020).

However, alongside the growth in social media usage, there has been increasing concern about its impact on students' academic writing proficiency (Mohammed, 2024; Ebrahimi, 2024; Khurram et al., 2024). Empirical studies, such as Ebrahimi (2024); Khurram et al. (2024) and Mohammed (2024) have highlighted the influence of WhatsApp discourse on

writing, pointing to issues like ill-formed grammatical structures, inappropriate punctuation, incorrect abbreviations, misspelled words and illogical flow of ideas in students' academic work. Scholars like Mtallo and Marley (2016) and Msanjila (2015) argued that many students tend to write their essays as they would speak, reflecting an informal and conversational style more suited to online or social media communication than academic writing. This form of writing, in which words are written phonetically, is indicative of non-academic language and suggests that internet-mediated language, particularly via social media, is having a direct impact on students' academic writing skills.

In response to these concerns, studies have highlighted strategies to mitigate the influence of WhatsApp discourse on academic writing proficiency among university students (Mohammed, 2024; Ebrahimi, 2024; Khurram et al., 2024). Key interventions include targeted educational workshops that emphasize the differences between informal and formal writing styles, with practical exercises to reinforce academic writing conventions (Djatkika et al., 2022). Additionally, Communication Skills (CL) courses and explicit instruction in academic language, as suggested by Reith-Hall and Montgomery (2023) and Dirgeyasa (2016), help students develop the necessary skills for academic writing across disciplines. Curriculum design, such as comparative analysis assignments encouraging students to revise informal writing into formal academic texts, also supports this transition (Kostopoulou & O'Dwyer, 2021). Furthermore, integrating digital literacy and peer support mechanisms like writing groups and peer review processes fosters an adaptable and reflective writing practice (Budiana & Mahmud, 2020; Kandel & Kandel, 2023).

The use of technology plays a critical role in improving academic writing. Tools like grammar checkers, WhatsApp-based instruction and collaborative learning environments have been shown to enhance student engagement and writing performance (Biju & Selvaraj, 2023; Masrul & Erliana, 2024). Blended learning approaches, combining traditional and online methods, further support students in bridging the gap between informal social media language and academic writing standards (Hassan et al., 2021). Additionally, as highlighted by Emekako and Ajose (2024) and Gopee and Deane (2013), writing camps and

institutional support strategies provide students with structured opportunities for developing writing skills and fostering academic self-efficacy.

Despite growing concern over the adverse implications of WhatsApp discourse on academic writing proficiency (Afzal et al., 2025), there remains a lack of research on how these deviations from academic writing can be addressed among university students in Tanzania (Mbegani et al., 2023; Kayuni, 2022). Without addressing such deviations from academic writing, students will likely continue to internalize informal linguistic patterns, including the excessive use of abbreviations such as pls instead of please, info instead of information, gvt instead of government, b4 instead of before and disregard proper punctuation, which may hinder their ability to meet academic standards in written assignments and examinations (Paschal et al., 2024; Manzolim & Delacruz, 2024). This trend could ultimately affect their academic performance and limit their preparedness for professional communication in formal settings (Mukenge, 2024).

Moreover, little attention has been devoted to evaluating practical strategies aimed at addressing these impacts within the Tanzanian higher education setting, leaving a critical gap in pedagogical interventions that could support students in developing strong academic writing skills (Kayuni, 2022; Mbegani et al., 2023).

The persistent influence of WhatsApp discourse, with its informal language structures, abbreviations and non-standard punctuation, has raised concerns among instructors about the diminishing academic writing proficiency of university students (Mohammed, 2024). While there is substantial research on the influence of social media and informal communication on language development, most studies have concentrated on broad linguistic trends rather than context-specific pedagogical interventions within the context of Tanzanian higher education. This study sought to fill the knowledge gap by examining strategies for addressing the impact of WhatsApp language on academic writing proficiency among Tanzanian university students.

Theoretical Underpinnings

This study adopted the Communication Accommodation Theory (CAT), which was proposed by Giles et al. (1987). According to the theory, individuals adjust their language and communication styles to accommodate others in

various social contexts. It further posits that people modify their speech patterns, including tone, vocabulary and syntax, to either converge (aligning with the communication style of others) or diverge (emphasizing differences).

The accommodation process can be influenced by various factors, including social identity, group membership and interpersonal dynamics. The theory was applicable in this study to provide a strong foundation for exploring intervention strategies to mitigate the impact of WhatsApp discourse on academic writing proficiency among university students in Tanzania. This theory is particularly relevant in understanding how university students unconsciously shift from informal, abbreviated and emotive language used in WhatsApp discourse to the more structured and formal register expected in academic writing. In Tanzania's university environment, where digital platforms like WhatsApp dominate peer-to-peer communication, CAT provides a useful lens to examine the extent to which students accommodate informal norms and how this influences their academic writing proficiency.

Methodology

This section presents the methodology adopted in this study. It covers the study design and approach, study area, population and sample size as well as sampling techniques, data collection methods and data analysis.

Design

This study employed a convergent mixed-methods design. The design aligns with a mixed-methods approach that combines quantitative and qualitative data, thereby enabling data triangulation and complementarity (Sekaran & Bougie, 2016; Saunders et al., 2012; Lund, 2012). The quantitative method provided data for statistical analysis while the qualitative method provided rich, contextual insights that enhanced the interpretation and understanding of the findings.

Population and Sampling

The study was conducted at the University of Dar es Salaam (UDSM), which was selected for its status as a leading and diverse public higher learning institution in Tanzania, with over 39,000 undergraduate students as of 2020/2021 (UDSM, 2023). The focus was on second-year undergraduate students and instructors from six colleges and three schools within the Mwalimu Julius Nyerere Campus,

including College of Social Sciences (CoSS), College of Humanities (CoHU), College of Natural and Applied Sciences (CoNAS), College of Engineering and Technology (CoET), College of Agricultural Sciences and Fisheries Technology (CoAF), College of Information Communication and Technology (CoICT), the University of Dar es Salaam Business School (UDBS), the School of Education (SoED) and the University of Dar es Salaam School of Law (UDSoL). These colleges and schools were purposively selected for their representation of various fields of study, the number of students they enroll and the diversity of their academic programs. Additionally, second-year students were targeted because of their substantial exposure to both WhatsApp-mediated communication and academic writing, making them well-suited for assessing the impact of WhatsApp discourse on academic writing.

Given the study population of 6,724 second year undergraduate students, an error margin of 5% and confidence level of 95%, the sample size was calculated using a statistical formula by Yamane (1967) to be 378 students. Probability Proportional to Size (PPS) sampling and simple random sampling (SRS) techniques were adopted to draw the sample of 378 students from the selected six colleges and three schools for an online survey. PPS sampling ensured that the probability of selecting students from each college or school was proportional to its size, thereby maintaining the sample representativeness. The technique was chosen because it captures the diversity of student experiences across different academic programs by proportionally representing the respective sizes of the selected colleges and schools (Creswell, 2018).

Furthermore, SRS technique was applied to select students from the six campus colleges and three schools. The nine registers of 2nd year students were arranged serially and alphabetically and the registers served as the sampling frames for each respective college and school. Sub-samples of students from each college and school were selected using computer-generated random numbers, which were matched against the serial numbers of students in the registers. This ensured that every student in the registers had an equal chance of being selected, thereby maintaining random selection and reducing selection bias (Sekaran & Bougie, 2016). Therefore, the sample size of the students who participated in the online survey was as follows: CoSS (127), CoHU (89), CoNAS (33), CoET (29), CoAF (13), CoICT (7), UDBS (43), SoED (31) and UDSoL (6).

The study further randomly selected a sample of 16 instructors from a total of 32 instructors teaching Communication Skills (CL) and Development Studies (DS) courses, representing 50% of the instructors in those courses, to administer the questionnaires. These instructors were selected for their expertise in teaching CL and DS courses and for their ability to provide insights into the impact of WhatsApp-based text interactions on students' academic writing. In addition, a purposive sample of 40 FGD participants was distributed proportionally across colleges and schools based on their size, ensuring representation of the student population. With 10 participants per group, a total of 40 students were organized into 4 FGDs, facilitating in-depth discussions while maintaining manageability. Participants from each selected college and school were purposively selected using pre-determined criteria, including gender and academic program, to capture a diverse and representative range of perspectives. The 40 FGD participants were composed of students from the six colleges and three schools as follows: CoSS (13), CoHU (9), CoNAS (4), CoET (3), CoAF (1), CoICT (1), UDBS (5), SoED (3), and UDSoL (1).

The researchers obtained consent from WhatsApp group administrators and joined the nine second-year college/school-based WhatsApp groups as non-participant observers from January 2023 to April 2023. Using the probability proportional to size (PPS) technique, the researchers collected 378 students' WhatsApp group text messages. The text messages were systematically selected at specified time intervals and purposively drawn from WhatsApp groups associated with six colleges and three schools, ensuring proportional representation and relevance to the study objective. Within each college and school, purposive sampling was applied to select relevant messages at regular intervals, focusing on texts with distinctive linguistic features that deviated from academic writing (Kothari, 2004). The sub-samples of WhatsApp text messages from each college and school are presented as follows: CoSS (127), CoHU (89), CoNAS (33), CoET (29), CoAF (13), CoICT (7), UDBS (43), SoED (31), and UDSoL (6).

In addition, a sample of 108 students' written examination scripts (12 scripts for each selected college and school) was collected from the Institute of Development Studies (IDS). The sample was selected based on students' academic performance in the DS course examination for the 2021/22 academic year, stratified into high performance (HP), medium performance (MP) and low performance

(LP). Using simple random sampling, the researchers selected 4 scripts from the HP stratum, 4 from the MP stratum and 4 from the LP stratum, resulting in 12 scripts from each of the selected six colleges and three schools.

Data Collection Methods

The researchers collected 378 students' WhatsApp group text messages from nine second-year college/school-based WhatsApp groups to identify the impact of WhatsApp text-based interaction on students' academic writing. The researchers gained access to 2nd-year college and school-based WhatsApp groups via group administrators and obtained informed consent from all members to observe their discussions.

Acting as non-participant observers (with group members aware of the observation), the researchers selected, at regular intervals, text messages that exhibited the linguistic features of WhatsApp discourse characterizing university students' social media practice. Non-participant observation within the students' WhatsApp groups allowed the researchers to identify WhatsApp chats containing linguistic features that deviated from formal academic writing. The selection process of WhatsApp chats aimed to capture a range of linguistic features of WhatsApp discourse, which were then analyzed to understand how the WhatsApp text-based interaction influences students' academic writing. The collected WhatsApp text messages were anonymized, assigned unique identifiers to ensure confidentiality and preserved for linguistic analysis.

The study also collected 108 students' examination scripts from the IDS, selected based on students' academic performance for the 2021/22 academic year. The same were stratified into high performance, medium performance and low performance. Four scripts were randomly selected from each performance stratum, for a total of 12 scripts per college or school. In addition, an online

survey was used to collect both quantitative and qualitative data from 378 students and 16 instructors. Furthermore, focus group discussions (FGDs) were conducted with students to collect mostly qualitative data. Through these methods, the study uncovered the impact of WhatsApp text-based interactions on students' academic writing and identified strategies to mitigate this impact on students' academic writing proficiency.

Data Analysis

The quantitative data was analysed using descriptive statistics with the aid of the IBM SPSS Statistics version 25 software. Descriptive statistics, including percentages, means and standard deviations, were used to summarize the study variables. The quantitative findings provided a foundation for identifying recurring issues, which were further enriched by qualitative insights from focus group discussions, students' text messages and written examination scripts. The collected qualitative data was analyzed using MAXQDA version 2022 through content analysis approach. MAXQDA facilitated the coding process by allowing the researchers to categorize and identify specific linguistic features, themes and patterns in the data. The analysis focused on identifying the linguistic features of WhatsApp discourse in students' academic writing and on strategies to mitigate the impact of WhatsApp text-based interactions on their academic writing proficiency.

Results and Discussion

This section presents the findings and discussion of the findings, guided by research questions.

Research Question 1: What is the perceived impact of WhatsApp text-based interaction on students' academic writing?

The findings in Table 1 reveal various linguistic features, including grammatical mistakes, improper spelling, inappropriate punctuation, capitalization issues and the use of abbreviations issues.

Table 1: Students' Perceptions on the Impact of WhatsApp Text-Based Interaction

Perceived Impact of WhatsApp	Mean	Interpretation
I do not care about reviewing and editing a message before sending	3.79	Agree
WhatsApp tool has a negative impact on my academic writing skills	3.98	Agree
My texting habit affects my compliance with academic writing standards	3.91	Agree
Texting habit negatively affects academic spelling, grammar and punctuation.	3.94	Agree
The overuse of WhatsApp shortcuts affects the academic writing proficiency	4.04	Agree
WhatsApp text interaction negatively affects academic language standards	3.93	Agree
The frequent use of informal language affects my academic writing proficiency	3.99	Agree

Students' perceptions of how WhatsApp text-based interactions affect their academic writing are presented in Table 1, where the scale of the mean score interpretation was as follows: 1.00 - 1.49 = Strongly Disagree, 1.50 - 2.49 = Disagree, 2.50 - 3.49 = Neutral, 3.50 - 4.49 = Agree and 4.50 - 5.00 = Strongly Agree.

The findings in Table 1 reveal strong consensus among students' perceptions that texting habits negatively affect their academic writing standards. The high mean values (ranging from 3.79 to 4.04) across statements reflect a notable tendency for students to agree with the assertions that texting behaviours, characterised by informal language, shortcuts and non-standard grammar, interfere with academic writing skills.

On the other hand, instructors were assessed regarding their perceptions of the impact of WhatsApp text-based interaction on students' academic writing. The findings indicate that the instructors generally agreed that WhatsApp encourages students to use substandard or unconventional spelling. They also noted inappropriately use of punctuation marks and the development of habits involving incomplete sentence construction, which affect their use of conjunctions (Mohammed, 2024). Furthermore, they agreed that WhatsApp affects students' grammar, including subject-verb agreement. The informal and often grammatically lax environment of WhatsApp appears to weaken students' ability to consistently apply subject-verb agreement rules in their academic writing (Mirza et al., 2022).

The qualitative findings from focus group discussions (FGDs) with surveyed instructors and students indicated that WhatsApp text-based interactions significantly influenced students' academic writing practices. Instructors held the view that WhatsApp-driven linguistic habits, such as the use of informal language, abbreviations, slang and incomplete sentences, negatively impact students' academic writing. One of the instructors clarified the point by using the following words: "WhatsApp text-based interactions influence students in their academic writing. I often see students using incorrect spelling and punctuation in their academic works, which I believe is partly associated with the shortcuts and informal language they regularly find on WhatsApp" (Instructor, 16th May, 2023).

According to FDG results, students perceived the informal nature of WhatsApp text-based interactions as making it challenging to transition to formal academic writing. They observed that texting habits, which often involved shortcuts, slang and casual language, affected their academic writing. During the FGDs, one of the students stressed:

When I text on WhatsApp, I do not worry about grammar or using complete sentences. It is all about speed and convenience. But when I try to write for my academic works, I sometimes find myself repeating the same informal style, like skipping punctuation or using shortcuts. It is a struggle to break those habits and switch back to formal writing (Student, 23rd May, 2023).

These findings align with those of previous studies, including Ikram-ullah et al. (2022), who reported that WhatsApp texting can deteriorate students' spelling abilities due to the frequent use of non-standard spellings and abbreviations. Similarly, Ahmad et al. (2022) found that text messaging affects students' spelling proficiency, suggesting potential for improvement through targeted intervention. On the other hand, Masrul and Erlina (2024) reported that the informal nature of WhatsApp messaging leads to inconsistent punctuation usage, which can affect academic writing. Along the same lines, scholarship indicates that the casual approach to punctuation in WhatsApp messages may contribute to punctuation errors in formal writing (Ujakpa & Heukelman, 2018; Mohammed, 2024) and to lapses in subject-verb agreement, affecting students' academic writing (Ahmad et al., 2022).

Research Question 2: What linguistic features of WhatsApp discourse are evident in students' academic written scripts?

The analysis of linguistic features of WhatsApp discourse evident in students' academic written scripts was done by examining both students' WhatsApp group chats and their selected examination scripts. The results revealed elements of WhatsApp discourse practices, such as informal language, shortcuts and non-standard grammar that diverge from conventional academic writing standards. The major linguistic features of WhatsApp discourse found in students' examination scripts are summarized in Table 2.

Table 2: Major Linguistic Features of WhatsApp Discourse in Students' Examination Scripts

Linguistic Features	Frequency (n)	Percentage (%)
Inappropriate capitalization	93	86.1
Abbreviation, Acronyms and Initials	89	81.9
Misspelling	75	69.4
Inappropriate use of punctuation marks	65	60.2
Omission and clippings	63	58.3

The results in Table 2 highlight the frequency and percentage of various linguistic features of WhatsApp discourse observed in students' academic written scripts. The analysis of both students' WhatsApp messages and academic scripts revealed that, among 108 students' academic scripts, 93 (86.1%) contained instances of missing capitalization. Words such as Africa, Tanzania, South Africa, China and Kenya were frequently written without the initial capital letter as required by grammatical conventions.

The use of inappropriate punctuation marks was observed in 60.2% of students' examination scripts, in which students either misused punctuation (e.g. using a comma instead of a period). Furthermore, students included exaggerated full stops. This leads to unclear sentence boundaries, disrupted flow of ideas and overall diminished readability. Such habits, likely carried over from the informal and often hurried nature of WhatsApp-mediated communication, can result in confusion for readers and may undermine the professionalism expected in academic discourse.

Misspellings were another significant issue, found in 69.4% of the students' academic scripts. The examples of words such as 'fills' for feels, 'indipendent' for independent, 'complite' for complete, 'Singapol' for Singapore, 'makets' for markets, 'vairas' for virus, 'sapport' for support, 'badjet' for budget, 'forain' for foreign and 'ligal' for legal illustrated this phenomenon.

The use of inappropriate punctuation marks was observed in 60.2% of the students' academic scripts, where students either misused punctuation (e.g., using a comma instead of a period), used them excessively or included exaggerated full stops. Omission and clipping of words were evident in 58.3% of the analyzed students' academic written samples. This practice involves shortening or omitting parts of words. Examples from students' academic written scripts include truncated forms, such as 'theor' for theory, 'pademic' for pandemic, 'coffe' for coffee, 'contribut' for contribute, 'numbe'

for number, 'wher' for where, 'wok' for work and 'dvelop' for develop.

The qualitative findings from both surveyed instructors and students in FGDs highlighted several linguistic features of WhatsApp discourse that appeared in students' examination scripts. These features included informal language use, abbreviation, non-standard grammar and spelling errors. It was revealed that the informal nature of WhatsApp communication often carried over into students' academic writing. One of the instructors noted: "WhatsApp text-based interactions encourage students to be more casual in their writing. They often use shorthand, slang and neglect basic grammar rules like capitalization and punctuation; these habits carry over into their academic writing" (Instructor, 16th May, 2023).

In addition, students in FGDs added that the informal and quick nature of WhatsApp-mediated communication influenced their academic writing, making it difficult to adhere to formal writing standards. Many students acknowledged that they frequently used shorthand, omitted punctuation and ignored capitalization rules in their WhatsApp messages, habits which sometimes carried over into their academic assignments. During the FGDs, one of the students stated: "On WhatsApp, I send messages quickly without thinking too much about spelling or grammar. I do not always use capital letters or check my sentences, so when I write academic papers, I have to catch myself and fix these habits" (Student, 23rd May, 2023).

These findings suggest that students transfer informal communication habits from WhatsApp into their academic writing, leading to a noticeable impact on their adherence to academic standards. The frequent issues of inappropriate capitalization, misspellings, improper punctuation and word omission or clipping indicate that the relaxed, rapid and often error-tolerant nature of WhatsApp-mediated communication influences their formal academic writing. These linguistic features disrupt the clarity, professionalism and structure expected in the academic discourse. These findings therefore

highlight the need for targeted interventions to help students distinguish between informal online interactions and formal academic conventions.

The findings from this study align with those of Allagui (2014), who evaluated students' writing performance through WhatsApp and observed that the platform encourages a more conversational and less formal style of writing. Similarly, Cremades et al. (2021) noted that while these social platforms facilitate communication and collaboration, they also introduce challenges in maintaining language standards. Consistent with this study, several previous studies reported a negative impact of WhatsApp discourse on students' academic writing proficiency. For instance, Ikram-ullah et al. (2022) found that social media and WhatsApp messaging negatively affect students' academic writing skills, emphasizing reduced writing quality and coherence. Similarly, Ahmad et al. (2022) observed that text messaging adversely affects students' writing skills,

leading to a decline in academic writing standards. Masrul and Erliana (2024) further support these findings, showing that WhatsApp group use as a language-learning tool does not enhance academic writing performance and may even hinder it.

Research Question 3: What strategies can be used to mitigate the impact of WhatsApp text-based interactions on students' academic writing proficiency?

The findings from both students and instructors demonstrate a shared recognition of the importance of various strategies for mitigating the impact of WhatsApp text-based interactions on students' academic writing proficiency. The results from the surveyed students appear in Table 3, with the following scale of mean score interpretation: 1.00-1.49 = Strongly Disagree, 1.50-2.49 = Disagree, 2.50-3.49 = Neutral, 3.50-4.49 = Agree and 4.50-5.00 = Strongly Agree.

Table 3: Strategies for mitigating the impact of WhatsApp text-based interactions

Proposed strategies	Mean	Interpretation
Establishing academic writing centres at the university/college to help students develop formal writing skills	4.20	Agree
Organizing sensitization seminars/workshops to address the impact of "internet-based language" on academic writing	4.18	Agree
Reforming the Communication Skills course to include the impact of internet discourse features like WhatsApp on academic writing	4.08	Agree
Introducing a stand-alone academic writing course separate from the broader communication skills course	4.03	Agree
Regular evaluation and feedback through academic writing tests and assignments to assess and improve students' writing performance	3.98	Agree
Incorporating academic writing practices into digital platforms like WhatsApp	3.91	Agree

The findings in Table 3 suggested the establishment of a dedicated academic writing centers on campus (mean = 4.20). Respondents were of the view that universities should establish a dedicated center for academic writing skills where students can receive specialized guidance and support. Respondents proposed that this center would provide personalized tutoring and resources to help students improve their writing skills. The center could host regular seminars on various aspects of academic writing, allowing students to deepen their understanding and receive feedback on their work. The center could also serve as a hub for monitoring students' use of digital communication tools in academic contexts, helping them to navigate the challenges of transitioning from informal to formal writing. By providing a supportive environment focused on academic writing, students would have access to the resources they need to succeed. The

fact that both students and instructors proposed establishing a dedicated center for academic writing on campus underscores a shared recognition of the pressing need for structured academic writing support.

The study's findings suggest organizing and conducting sensitization seminars/workshops at the university to address the impact of "internet-based language" on academic writing (mean = 4.18). The high level of agreement among students suggests that they are aware of the risks posed by the informal language commonly used on WhatsApp and are open to interventions to help them better manage these risks. Additionally, the students suggested the reforming of the Communication Skills course and offering regular academic writing tests/workshops (mean = 4.08). The study highlighted the importance of placing greater emphasis on the practical aspects of academic

writing within the Communication Skills course. The majority of the instructors (93.8%) highlighted the need for the Communication Skills (CL) course to emphasize practical academic writing by incorporating more hands-on exercises, such as regular handwritten assignments. Participants suggested dividing classes into smaller writing seminar groups to manage large student enrolments and implementing structured peer review sessions to enhance engagement and feedback.

The findings further show that the surveyed students advocated for introducing a stand-alone academic writing course, separate from the broader communication skills course (mean = 4.03). This course would focus specifically on formal writing skills, including grammar, punctuation, sentence structure and subject-verb agreement. Additionally, the results revealed that the course should emphasize the differences between professional and casual writing, ensuring that students understand how the informal language used on WhatsApp and other digital platforms can negatively affect their academic writing. By dedicating more time and attention to these areas, students can develop a solid foundation in formal writing, which is essential for academic success.

Moreover, the findings from the surveyed students indicate that regular evaluation and feedback are essential for improving students' academic writing skills (mean = 3.98). The students proposed implementing frequent tests and assignments focused solely on academic writing to help them recognize and correct their mistakes. Digital tools could provide instant feedback on grammar, punctuation and structure, enabling students to learn from their errors in real-time. Continuous assessment would help students progressively strengthen their writing skills throughout their studies, ultimately leading to greater proficiency in academic writing. By addressing these key areas, educational institutions can significantly reduce the negative impact of WhatsApp and other digital platforms on students' academic writing abilities.

Additionally, the study revealed that incorporating academic writing practices into digital platforms, such as WhatsApp, can be a valuable strategy for mitigating the impact of WhatsApp text-based interactions on students' academic writing (mean = 3.91). For instance, instructors could create WhatsApp groups for academic writing, encouraging students to practice formal writing under their

supervision. These groups would enable students to receive immediate feedback on their writing and learn to adapt their communication style from informal to formal in digital spaces. By integrating academic writing into the platforms students frequently use, they can become more aware of distinctions between different writing contexts and apply this understanding to their academic work.

The results from the focus group discussions (FGDs) supported that establishing a dedicated center for academic writing on campus could play a significant role in supporting students. This center would provide personalized tutoring and resources to help students improve their writing skills. It could host regular seminars on various aspects of academic writing, thereby offering students the opportunity to deepen their understanding. One of the instructors stated, "A Centre for Academic Writing would be invaluable for students. It could offer one-on-one tutoring, workshops and resources specifically designed to improve their writing skills. Regular seminars on academic writing would help students address their weaknesses in academic writing" (Instructor, 18th May, 2023).

The study's participants noted the need to introduce a standalone academic writing course, separate from the broader communication skills module. The instructors emphasized that while communication skills are essential, a specific focus on formal writing is necessary to address the gaps in grammar, punctuation and overall sentence structure that students often struggle with in their academic writing. In this aspect, one of the instructors emphasized: "There is a clear need for a dedicated academic writing course, separate from the general communication skills module. This course should focus on formal writing aspects like grammar, punctuation and sentence structure, highlighting the differences between academic and informal writing" (Instructor, 15th May, 2023).

The participants further supported the need for regular evaluation and feedback for improving students' academic writing skills. Implementing frequent tests and assignments focused solely on academic writing, with detailed instructor feedback, would help students recognize and correct their mistakes. Digital tools can provide immediate feedback on grammar, punctuation and structure, enabling students to learn from their errors in real-time. This ongoing assessment would ensure that students continue to develop their writing skills

throughout their studies, ultimately leading to greater proficiency in academic writing. During the FGDs, one of the students proposed,

We should be given more assignments specifically focused on academic writing, with regular feedback from our instructors. Also, using digital tools for instant feedback on our grammar and punctuation would allow us to catch mistakes as we make them and correct them before they become habits (Student, 23rd May, 2023).

The results regarding the proposed strategies to mitigate the impact of WhatsApp text-based interactions on students' academic writing proficiency are consistent with previous studies. For instance, the proposed strategy for establishing a dedicated academic writing center is consistent with previous research by Wingate (2006), Lillis and Curry (2010) and Emekako and Ajose (2024), all of which emphasized the role of writing centers in providing personalized support to improve academic writing. The study's findings regarding organizing and conducting sensitization seminars/workshops at the university are consistent with Wingate (2012), who noted that such workshops play a crucial role in helping students develop a better understanding of academic argumentation in essays. Wingate (2012) emphasized the importance of providing structured support, such as writing seminars, to enhance students' academic literacy and writing proficiency. Similarly, Murray (2013) underscored the value of academic writing workshops for postgraduate students and early-career researchers, highlighting their impact on writing productivity and skill development. Along the same lines, Gimenez (2008) advocated discipline-specific writing seminars, particularly in fields such as nursing and midwifery, to equip students with the necessary academic writing skills for their respective disciplines.

Likewise, the proposed strategy for reforming the Communication Skills course aligns with Murray's (2013) argument that curriculum reforms are essential to address the evolving challenges posed by digital communication. By incorporating instruction on the impact of internet discourse features, students can become more aware of the linguistic differences between academic and social media contexts, ultimately improving their writing skills. This suggestion is consistent with Murray (2013), who emphasized the need for curriculum reforms to address the challenges posed by digital

communication. By integrating instruction on the differences between academic and social media discourse, students can better understand these variations and enhance their academic writing skills. This strategy aligns with Defazio et al. (2010), who emphasized that writing assignments across various graduate and undergraduate courses, including research papers and experiential learning projects, aim to enhance students' writing skills.

The suggestion to introduce a stand-alone academic writing course aligns with Bailey (2014), who highlighted the importance of dedicated academic writing courses, particularly for non-native speakers, in strengthening formal writing abilities. Leki (2017) further supported this view, emphasizing that specific academic writing instruction is necessary for second-language learners, with a focus on formal writing skills, such as grammar, punctuation and sentence structure. Additionally, studies by Zhai et al. (2022) and Adi-Badiozaman (2017) highlighted the importance of English for Academic Purposes (EAP) courses for undergraduate students, particularly those in English-medium instruction environments. The findings on the introduction of regular evaluation and feedback through academic writing tests and assignments align with those of Gikandi et al. (2011), who highlighted the importance of formative assessments and regular feedback in enhancing writing skills. Nicol and Macfarlane-Dick (2006) also supported the role of effective feedback in fostering self-regulated learning.

Moreover, the suggestion of incorporating academic writing practices into digital platforms, such as WhatsApp is supported by studies by Khalil (2017) and Fathy et al. (2015), who documented that WhatsApp Messenger is one of the most effective mobile learning platforms for developing students' writing skills. Similarly, the findings align with those of Allagui (2014), who assessed students' writing performance through the use of WhatsApp. The strategy is also supported by Khan et al. (2024), who found that WhatsApp has emerged as a powerful educational tool for enhancing college students' writing skills. The findings show that students held a 'high' perception of WhatsApp's impact on their writing creativity, particularly with respect to spelling, punctuation, capitalization, and grammar. Similarly, Belle (2024) highlighted that lecturers believe WhatsApp facilitates remote online collaborative learning, bridges the gap between formal and informal education and enriches the

quality of learner-generated content, which is more contextualized and relevant for students' professional development in open education. Similarly, Al-Khalidi and Khouni (2021) showed how technology enhances writing proficiency by providing immediate feedback on grammatical and spelling errors, promoting ongoing engagement with the work and improving vocabulary skills. This shift towards digital platforms and technology-enhanced learning methods contributes to the development of students' academic writing skills by providing a dynamic and interactive learning environment.

Conclusion and Recommendations

This study concludes that the use of WhatsApp text-based interaction has a negative impact on students' academic writing proficiency. Furthermore, the linguistic features of WhatsApp discourse, such as inappropriate capitalization, abbreviations, acronyms and initials, misspellings, inappropriate use of punctuation and omissions and clipping, are prevalent in students' examination scripts. Various strategies are proposed for mitigating the impact. These include establishing academic writing centers on the university campus to help students improve formal writing skills. Furthermore, it is crucial for the university to organize sensitization seminars and workshops to address the impact of internet-mediated language on students' academic writing proficiency. The study recommends reforming the Communication Skills course to include the mitigation measures for internet-mediated discourse features, such as WhatsApp, in students' academic writing. Additionally, it is important to introduce a stand-alone academic writing course focused on formal writing skills. Conducting regular evaluation and feedback through academic writing tests and assignments to improve students' writing performance is essential. The study recommends that integrating academic writing practices into digital platforms, such as supervised WhatsApp groups, would provide students with opportunities to practice formal writing and receive immediate feedback. Thus, the proposed strategies will enhance students' academic writing skills while mitigating the adverse effects of WhatsApp text-based interactions on academic writing skills among university students.

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