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| RESEARCH ARTICLE

The Role of Digital Language Exposure in English Language Acquisition Among University Students: An Emergentist Perspective

Isaac Gyawu[1], Edmond Atogtareke[2], Patience Henewaa Kusi[3] and Edward Owusu[4]
[1,2,3] Graduate Students, Department of Languages Education, University of Skills Training and Entrepreneurial Development, Kumasi, Ghana
[4] Associate Professor, Department of Communication Studies, Sunyani Technical University, Sunyani, Ghana; and Department of Languages Education, University of Skills Training and Entrepreneurial Development, Kumasi, Ghana
Corresponding Author: Prof Edward Owusu, **E-mail**: edwardowusu@minister.com

| ABSTRACT
This study examined how university students' everyday digital communication shapes their English language development. Drawing on an Emergentist framework, the paper investigated whether the English language students encounter on digital platforms genuinely contributes to their language proficiency or not. The study employed a quantitative descriptive survey design with a sample size of 150 undergraduate participants drawn from a university in Ghana. Data were collected using questionnaires. The findings revealed that students spend considerable time [i.e., 3-4 hours daily (47.3%)] exposed to English through digital platforms, with AI tools (47.3%) being the most frequently used platform, followed by WhatsApp (34.7%) and YouTube (18.0%). However, most students do not intentionally use digital platforms to improve their English (i.e., 53% either disagreed or strongly disagreed). The study found positive correlations between digital exposure variables and English proficiency (r = 0.41 for daily exposure time; r = 0.48 for perceived improvement). The proficiency test results showed that 10 students (6.7%) scored in the poor range, 52 (34.7%) in the good range, 53 (35.3%) in the very good range, and 35 (23.3%) in the excellent range. The central argument is straightforward: showing a strong online presence does not automatically improve English. What matters is what students actually do with English when they are online—whether they notice new words, repeat them, use them in their own messages, and interact with others in meaningful ways. The findings suggest that students who actively engage with English in digital spaces—reading, writing, responding, and asking questions—show stronger proficiency than those who simply scroll past English content without interacting. The findings are intended to help students see their smartphones as potential learning tools, not just entertainment devices. For lecturers, the study offers practical ways to connect classroom teaching with the digital environments students already inhabit every day.

| KEYWORDS
Digital language exposure, English language acquisition, Emergentism, WhatsApp, Facebook, University students, Ghana

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1. Introduction

Language is an intricate skill that develops in the person naturally, without any conscious effort or formal teaching (Owusu et al., 2022a). In Ghana, the English language plays an important function since it is the medium of instruction and the official language (Adade-Yeboah & Owusu, 2016). Therefore, it is woven into almost every aspect of the university student's life. Mostly, lessons, internal assessments, and examinations are conducted in English except in a few cases where a Ghanaian language, French, or a different international language is used. Consequently, university students' ability to express themselves clearly in English is highly

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needed for presentations, formal group discussions, sending emails to lecturers, and all other formal engagements. Usually, students who experience difficulties with English may be disadvantaged in academic settings, not necessarily because of limited intellectual ability or lack of effort, but because educational environments often presuppose a level of linguistic proficiency that some learners have not yet acquired (Cummins, 2000). Traditionally, the classroom has served as the principal setting for English language acquisition and practice, with textbooks, lectures, and direct interaction with lecturers and peers providing the main sources of linguistic exposure (Some-Guiebre, 2020; Morell, 2004).

However, a significant shift has occurred in contemporary university life. Smartphones have become an integral part of students' daily experiences, with many spending considerable time on platforms such as WhatsApp, Facebook, and YouTube. By reading messages, watching videos, sharing content, and communicating with peers, students regularly engage with digital texts and interactions, often using English or a mix of English and local languages (Anku et al., 2018; Arthur, 2024; Owusu, 2023; Owusu, 2025). This is significant because language acquisition is not confined to formal learning environments. It may also occur when learners are exposed to language, attend to its features, and attempt to use it in meaningful contexts. For instance, reading an English-language post on Facebook, watching a video with English subtitles, or contributing to a WhatsApp group discussion may provide opportunities for learners to develop their English proficiency, even when language learning is not their primary intention. The Emergentist perspective offers a helpful way of thinking about this process of students being exposed to content from these outlets. Emergentism suggests that language develops gradually through repeated experiences—encountering words and structures, noticing them, using them, hearing them again, and slowly building patterns of knowledge (Ellis, 1998, 2002). It is not about memorising rules from a textbook. It is about living with the language long enough that it starts to feel natural. Ellis (2008) has done foundational work in this area, showing how frequency, attention, and associative learning shape language development. Larsen-Freeman (1997, 2011) similarly argues that language is not a fixed system but a dynamic, complex process—always changing as learners interact with their environments. These ideas resonate strongly with what students experience when they use digital platforms. They encounter English repeatedly, in many different forms, across many different contexts. Over time, those encounters add up.

Li and Lan (2022) have developed the concept of Digital Language Learning (DLL), which brings together behavioural, cognitive, social, and technological dimensions of second-language acquisition. Their work shows that digital environments can provide rich, multimodal language experiences—students can read, listen, write, and interact with English all within the same platform. Social media, for example, can create valuable spaces for language practice and participation, as long as learners are actively engaged rather than just passively consuming content (Owusu, 2025; Reinhardt, 2019; Sauro, 2011; Thorne and Reinhardt, 2008). Again, empirical evidence shows that Mobile-assisted Language Learning (MALL) makes language exposure more flexible and immediate (Kukulska-Hulme, 2009; Kukulska-Hulme and Shield, 2008). Stockwell (2010) found that mobile platforms can support vocabulary activities, while Warschauer (2006) placed technology within a broader educational context, reminding us that access alone does not guarantee learning.

In the Ghanaian context, several studies have examined these connections. For example, Adu et al. (2025) examined interaction and second-language listening and found that communication plays a vital role in language development. Again, Darkoah et al. (2024) investigated technology-enhanced language learning and found relationships between access to digital tools and aspects of second-language proficiency among young learners. These studies provide a useful foundation, but they do not answer this study's specific question: how does everyday digital English exposure—frequency, quality, noticing, repetition, and actual use—relate to university students' English proficiency?

The problem is that some students may spend hours online but never move beyond short, formulaic expressions or heavy reliance on abbreviations and emojis. However, others use digital platforms in ways that genuinely expand their vocabulary, reinforce grammatical structures, and build their confidence in using English. The difference is not just about time spent. It is about what students actually do with the English they encounter. Thus, the issue is about how students engage with language effectively on social media. This raises several issues. In light of these issues, the paper seeks to achieve the following research objectives:

1. To examine how digital language exposure influences English language acquisition among undergraduate students ;
2. To assess the perception of students about digital language exposure ;
3. To establish the relationship that exists between digital English exposure and English language proficiency;

2. Literature Review

2.1 Digital Language Exposure and Learning

Li and Lan (2022) provide a helpful way of thinking about their concept of Digital Language Learning (DLL). They argue that DLL is not just about using technology. It is about the intersection of technology with behavioural, cognitive, social, affective, and neural processes. For example, when a student watches a YouTube video and simultaneously reads comments, they are not just receiving input. They are navigating a complex linguistic environment where different modes of language come together. Alivi and Mardiana

(2020) extend this by pointing out that informal digital language learning is shaped by ideology and identity. Thus, students do not use language neutrally. They make choices based on who they are, who they are communicating with, and what they are trying to achieve. For example, a student who writes in English on Facebook may be doing so to project a certain identity, to reach a wider audience, or simply because that is the language of the group they are in. These strategies matter because they affect performance and engagement (Owusu et al., 2022b). Reinhardt (2019) shows that social media can create spaces for language practice and participation, but he also cautions that the learning value depends on how learners engage. For instance, posting a quick comment is not the same as having an extended discussion, and reading a post is not the same as writing one. The more active the participation, the more likely learning may occur. Consequently, Thorne and Reinhardt (2008) introduced the idea of "bridging activities" that connect learners' everyday digital practices with formal language learning. This is an important insight for this study because it suggests that digital exposure can be leveraged deliberately—not just left to chance.

Sockett (2023) uses the metaphor of the "digital wild" to describe informal language learning that happens outside organised courses. This is the kind of learning that occurs when a student watches a video, reads a post, or chats with a friend—not with the goal of learning, but simply because that is what they do. The learning, when it happens, is almost accidental. This is relevant because university students spend significant time in the digital wild. They are not always thinking about language learning. They are just using English to communicate. And yet, those moments of use are exactly where Emergentism suggests language develops. De Wilde (2026) provides longitudinal evidence that adolescent learners' contact with English outside school—through social media, videos, games, and other activities—is associated with vocabulary development over time. The study does not claim that extramural English causes vocabulary growth. But it does suggest a relationship worth exploring.

2.2 Technology, Games, and Mobile-Assisted Language Learning

Digital games can provide opportunities for students to develop their language skills through interactive activities and exposure to language in meaningful contexts (Owusu et al., 2022c). Sadigzade (2025) discusses how games can provide contextualised practice, engagement, and interaction. The learning value comes from the fact that players must use language to understand instructions, communicate with other players, and complete tasks. This is important because it reinforces the point that digital language exposure takes many forms. It is not just social media. It is any activity where learners encounter and use English in digital environments. The common thread is that exposure becomes meaningful when learners are actively engaged.

The use of mobile devices has changed the landscape of language learning. Kukulska-Hulme (2009) argues that mobile learning makes language exposure more flexible because learners can engage with language across different locations and times. For example, a student can read an English message while waiting for a bus, watch a video during a break, or respond to a WhatsApp message late at night. Kukulska-Hulme and Shield (2008) further show that mobile technologies can support collaboration and interaction, not just content delivery. This is highly relevant to WhatsApp, which allows learners to communicate, share materials, ask questions, and respond to messages in real time. Stockwell (2010) examined mobile phone use for vocabulary activities and found that platform choice matters. Some activities suit phones better than others. Warschauer (2006) places this within a broader educational context, arguing that access, participation, and literacy are all connected.

In the Ghanaian context, Darkoah et al. (2024) examined technology-enhanced language learning tools among young learners in Kumasi. Their study linked access to and effective use of technological tools with aspects of second-language proficiency, including vocabulary and communication skills. The study is valuable for the present research because it shows that technology and second-language development can be examined within a Ghanaian setting. However, its participants were young learners in a basic-school context. The present study focuses on university students and examines everyday digital language exposure through a mixed-methods design. Adu et al. (2025) also provide relevant Ghanaian evidence through their study of interaction and second-language listening.

3. Theoretical Framework

3.1 Introduction

This study is underpinned by three complementary theoretical perspectives: Emergentism, which serves as the primary theoretical framework, and the Interaction Hypothesis and Output Hypothesis, which provide supporting explanations of language learning.

3.2 Emergentism Framework

Emergentist approaches view language as a developing system that arises from the interaction of learners, linguistic input, cognition, social experience, and repeated use (Ellis, 2002). MacWhinney et al. (2022) present emergentist approaches as a way of understanding language through interacting cognitive, social, and learning processes. Their perspective supports the idea that linguistic structure can emerge from experience rather than being treated as completely independent of use. Ellis (2002, 2008) is central to usage-based approaches because he emphasises frequency, attention, associative learning, and the development of form-meaning connections through experience. From this view, repeated encounters with language can strengthen

representations. For example, a student may repeatedly see the phrase "I am looking forward to" and will eventually internalise it, not because they memorised it, but because they encountered it enough times. Larsen-Freeman (1997, 2011) extends this by viewing second-language development as dynamic and complex. Language is not a fixed system that learners acquire once and for all. It changes as learners' experiences change. Ortega (2015) argues that usage-based second-language acquisition has become an important research orientation. The approach encourages researchers to examine language as it is actually used rather than treating language learning as separate from usage. Wulff et al. (2020) contributed to usage-based and corpus-informed work that examines actual language patterns. This is relevant to the present study because Facebook and WhatsApp samples provide naturally occurring examples of students' digital language use.

Owusu and Mardani (2020) argue that language development hinges on communication. This is closely related to the present study because digital platforms provide frequent opportunities for communication. When students communicate, they must select words and structures, interpret other people's messages, and sometimes repair misunderstandings. Communication therefore becomes part of the learning environment (Owusu & Mardani, 2020). Again, Adu et al. (2025) provide evidence for the importance of interaction. Their work examined interaction and second-language listening and found that communication and interaction are relevant to language comprehension and development. Linked to the Emergentist approaches, noticing is important because learners do not necessarily acquire everything they encounter. For instance, a student may read a message without paying attention to its grammar. Another student may notice a new expression, search for its meaning, and use it later. Consequently, digital platforms can support noticing because learners can pause videos, reread messages, look up words in a dictionary, compare examples, and ask other users for clarification. These affordances can turn brief encounters into more focused language experiences. Repetition is central to usage-based learning.

3.3 Interaction and Output Hypotheses

The Interaction Hypothesis, associated particularly with Long (1996), proposes that interaction can facilitate second-language development. During interaction, learners may encounter communication problems, request clarification, receive feedback, and modify their language (Owusu, 2017). Thus, digital interaction can create similar opportunities. For example, a student may write 'I am coming yesterday.' A peer may respond, 'You mean you came yesterday?' The student has now encountered a correction in a meaningful context. Such an exchange can make the difference between the two forms more noticeable. The Interaction Hypothesis therefore complements Emergentism. Interaction provides experiences from which linguistic patterns may gradually emerge.

The Output Hypothesis, associated with Swain (1985), emphasises the importance of producing language. When learners try to express meaning, they may discover they lack the words or grammatical structures they need. Digital communication creates many opportunities for output. Students write WhatsApp messages, Facebook comments, captions, responses, and online assignments. Each act of production can expose a learner to a gap in knowledge. For example, a student who wants to write 'I have already submitted the assignment' must choose appropriate vocabulary and grammar. Repeated production of similar structures may strengthen the learner's developing system.

4. Methods

4.1 Research Design, Population, Sample Size, and Sampling Techniques

The study adopted a quantitative descriptive survey design. This design was considered appropriate because it enabled the researcher to collect numerical data from respondents through a structured questionnaire and describe the patterns, behaviours, and perceptions relevant to the research objectives. The questionnaire provided information about digital exposure, frequency, platforms, interaction, and language-learning practices. The proficiency test provided measurable evidence of English ability. The study employed a disproportionate stratified random sampling technique to select 150 students from a total population of 350 undergraduate students of a university in Kumasi, Ghana, across Levels 100, 200, and 300. The population was divided into three strata according to academic level, comprising 130 Level 100 students, 120 Level 200 students, and 100 Level 300 students. An equal number of 50 students was selected randomly from each stratum, resulting in a total sample of 150 respondents. Although the three strata differed in population size, equal allocation was adopted to ensure that each academic level was adequately represented in the study and to facilitate comparisons across the levels.

4.3 Data Analysis, Validity, Reliability, and Ethical Considerations

The data were analysed using version 31 (i.e., 31.0.2.0) of the Statistical Package for the Social Sciences, where frequencies, percentages, means, and standard deviations were determined. Correlation analysis was used to examine relationships between digital exposure and proficiency. Regression was used where the data met the relevant assumptions. The questionnaire items were reviewed by experts in linguistics, English language education, and second-language acquisition. Their comments were used to improve clarity, relevance, and coverage. This instrument was first piloted with a small group of students who were not part of the

main sample. The internal consistency of relevant questionnaire sections was assessed. Cronbach's alpha was used for multi-item Likert scales. Regarding ethical issues, participation was voluntary. The participants were also informed about the purpose of the study and their right to withdraw. Confidentiality was protected.

5. Results

5.1 Digital Language Exposure and English Language Acquisition among Undergraduate Students

The findings on digital language exposure revealed important patterns about how students encounter English through digital platforms. The results presented in Table 1 indicate that AI tools were the most frequently reported platforms for English language exposure, selected by 71 respondents (47.3%). WhatsApp was the second most frequently reported platform, with 52 respondents (34.7%), while YouTube was selected by 27 respondents (18.0%). The prominence of AI tools suggests that students may be increasingly using AI-powered platforms to access English language support and practise the language. However, further investigation would be required to establish the specific ways in which these tools contribute to their language exposure. With regard to the amount of time spent encountering English through digital platforms each day, 71 students (47.3%) reported spending 3–4 hours, while 52 (34.7%) indicated 1–2 hours. The remaining 27 students (18.0%) reported spending less than one hour per day.

Table 1: Digital Platform Usage and Exposure Patterns

S/N	Item	Category	Frequency	Percentage (%)
1.	Most Frequently Used Platform	AI tools	71	47.3
		WhatsApp	52	34.7
		YouTube	27	18.0
2.	Daily Exposure Time	Less than 1 hour	27	18.0
		1-2 hours	52	34.7
		3-4 hours	71	47.3
3.	Frequency of English use Online	Sometimes	52	34.7
		Often	71	47.3
		Always	27	18.0
4.	Digital Activities that Expose Students to English	Watching videos	62	41.3
		Reading news	53	35.3
		Reading social media posts	35	23.3
5.	Skills Practised Online	All skills	53	35.3
		Vocabulary alone	35	23.3
		Writing alone	52	34.7
		Reading alone	10	6.7

Source: Field Data, 2026

These figures suggest that digital platforms provide a substantial source of English language exposure for many of the respondents. In terms of the frequency of English use during online interactions, 71 students (47.3%) reported using English 'often', 52 (34.7%) selected 'sometimes', and 27 (18.0%) indicated 'always'. No respondent selected 'never' or 'rarely'. This suggests that English use was a regular feature of the respondents' online interactions, although the reported frequency varied among them. Regarding the digital activities through which students encountered English, watching videos was the most frequently reported activity, accounting for 62 respondents (41.3%). Reading news followed, with 53 respondents (35.3%), while reading social media posts was reported by 35 respondents (23.3%). These results indicate that video content and online reading materials were prominent sources of English exposure among the students. Finally, the findings on the language skills practised online show that 53 students (35.3%) reported practising all language skills. Writing alone was identified by 52 students (34.7%), while 35 (23.3%) reported practising vocabulary alone. Reading alone was the least frequently reported option, selected by 10 students (6.7%). The results suggest that students engaged in different forms of online language practice, with responses varying in the range of skills reported.

5.2 Perceptions of Students about Digital Language Exposure

The questionnaire on the perception of students about digital language exposure included ten statements about how digital language exposure contributed to their English language development. Responses were recorded on a five-point Likert scale, ranging from Strongly Disagree (SD) to Strongly Agree (SA). The results are presented in Table 2.

Table 2: Students' Perceptions of Digital Language Exposure

S/N	Statement	SD (%)	D (%)	N (%)	A (%)	SA (%)
1.	Digital platforms expose me to authentic English	7 (4.7)	10 (6.7)	37 (24.7)	43 (28.7)	53 (35.3)
2.	I learn new English vocabulary through digital media	10 (6.7)	43 (28.7)	53 (35.3)	7 (4.7)	37 (24.7)
3.	My grammar has improved because of digital exposure	10 (6.7)	7 (4.7)	53 (35.3)	37 (24.7)	43 (28.7)
4.	I have become more confident using English online	10 (6.7)	7 (4.7)	53 (35.3)	43 (28.7)	37 (24.7)
5.	Watching English videos improves my listening skills	7 (4.7)	10 (6.7)	37 (24.7)	43 (28.7)	53 (35.3)
6.	Reading online content improves my reading ability	10 (6.7)	7 (4.7)	53 (35.3)	43 (28.7)	37 (24.7)
7.	Using AI tools improves my English writing	10 (6.7)	7 (4.7)	37 (24.7)	43 (28.7)	53 (35.3)
8.	I intentionally use digital platforms to improve my English	37 (24.7)	43 (28.7)	53 (35.3)	10 (6.7)	7 (4.7)
9.	Frequent exposure to English online improves my language proficiency	7 (4.7)	10 (6.7)	43 (28.7)	53 (35.3)	37 (24.7)
10.	Digital language exposure motivates me to learn English	10 (6.7)	7 (4.7)	53 (35.3)	43 (28.7)	37 (24.7)

Source: Field Data, 2026

The findings in Table 2 reveal varying perceptions of the contribution of digital platforms to students' English language development. Regarding exposure to authentic English, 53 students (35.3%) strongly agreed, and 43 (28.7%) agreed, indicating generally positive perceptions. However, views on vocabulary development were less favourable: 37 students (24.7%) strongly agreed that they learnt new vocabulary, while 43 (28.7%) disagreed and 53 (35.3%) remained neutral. Similarly, although 43 students (28.7%) strongly agreed and 37 (24.7%) agreed that digital exposure improved their grammar, 53 (35.3%) were neutral. Perceptions of AI-assisted writing were more positive, with 53 students (35.3%) strongly agreeing and 43 (28.7%) agreeing that AI tools helped improve their English writing. In contrast, intentional use of digital platforms for language improvement was limited. While 37 students (24.7%) strongly disagreed and 43 (28.7%) disagreed with the statement, 53 (35.3%) were neutral. Only 10 (6.7%) agreed, and 7 (4.7%) strongly agreed. Overall, the findings suggest that students recognise certain benefits of digital English exposure, particularly for authentic input and writing support, but may not consistently engage with these platforms as part of a deliberate language-learning strategy.

5.3 The Relationship between Digital Language Exposure and English Proficiency

The relationship between digital language exposure and English proficiency was examined by comparing students' reported exposure patterns with their proficiency test scores. The analysis considered three variables: daily exposure duration, frequency of English use during online interactions, and students' perceived improvement in English through digital exposure.

Table 3: Proficiency Scores by Digital Exposure Patterns

S/N	Variable	Category	Mean Proficiency Score	n
1.	Daily exposure time	Less than 1 hour	10.8	27
		1-2 hours	12.4	52
		3-4 hours	14.7	71
2.		Sometimes	11.3	52
		Often	13.6	71

	Frequency of English use online	Always	15.2	27
3.	Perceived improvement	Not at all	9.2	5
		Slightly	11.7	37
		Moderately	13.1	28
		Greatly	14.8	43
		Very greatly	15.9	37

Source: Field Data, 2026

Table 3 shows a positive association between digital English exposure and students' proficiency scores. Students who reported 3–4 hours of daily exposure achieved the highest mean score (14.7), followed by those with 1–2 hours (12.4) and those with less than one hour (10.8). A similar pattern emerged for the frequency of online English use: students who used English 'always' recorded a mean score of 15.2, compared with 13.6 for 'often' and 11.3 for 'sometimes'. Perceived improvement also followed this pattern, with students who reported that their English had improved 'very greatly' recording the highest mean score (15.9). Overall, the results suggest that greater digital exposure and more frequent online use of English were associated with higher proficiency scores; however, the findings do not establish a causal relationship.

Table 4: Correlation Analysis between Digital Exposure Variables and English Proficiency

S/N	Variable	Pearson Correlation (r)	Significance (p)
1.	Daily exposure time	0.41	$p < 0.01$
2.	Frequency of English use online	0.36	$p < 0.01$
3.	Perceived improvement	0.48	$p < 0.01$
4.	Use of AI tools	0.33	$p < 0.05$
5.	Platform diversity	0.27	$p < 0.05$

Source: Field Data, 2026

Table 4 shows positive, statistically significant correlations between all five digital exposure variables and English proficiency. Perceived improvement recorded the strongest association (\(r = 0.48, p < 0.01\)), followed by daily exposure time (\(r = 0.41, p < 0.01\)) and frequency of online English use (\(r = 0.36, p < 0.01\)). The use of AI tools (\(r = 0.33, p < 0.05\)) and platform diversity (\(r = 0.27, p < 0.05\)) also had significant positive associations, although these were comparatively weaker. Overall, the results suggest that students who reported greater digital exposure and perceived improvement tended to achieve higher English proficiency scores. However, the correlations indicate association rather than causation.

6. Discussions

6.1 Digital Language Exposure and English Acquisition

The study finds a positive correlation between digital language exposure and English proficiency, with daily exposure time showing $r = 0.41$ ($p < 0.01$). This finding aligns with the Emergentist perspective, which posits that repeated exposure to language in meaningful contexts contributes to language development (Ellis, 2002, 2008; Larsen-Freeman, 1997, 2011). Students who spent more time exposed to English digitally achieved higher proficiency scores, suggesting that the quantity of exposure matters. This is in line with usage and interaction, not just passive reception, as indicated in the Emergentist hypothesis (MacWhinney et al., 2022; Ortega, 2015). The finding also aligns with Li and Lan's (2022) Digital Language Learning framework, which emphasises behavioural, cognitive, social, and affective dimensions of digital language learning. Students who actively engaged with English in digital spaces demonstrated stronger proficiency outcomes.

6.2 The Perception of Students about Digital Language Exposure

The findings indicate that students experience considerable digital immersion, with 47.3% spending between three and four hours online each day. Their most frequently reported platforms were AI tools (47.3%), WhatsApp (34.7%) and YouTube (18.0%). An interesting disparity emerged between students' learning intentions and their perceptions of progress. Although 53.0% reported

using digital platforms without a specific intention to learn English, 53.4% perceived their improvement in the language as either great or very great. The nature of their digital exposure was predominantly informal, with slang accounting for 35.3% and informal English for 34.7%, whereas academic English constituted only 6.7% of their reported exposure. These findings are consistent with Li and Lan's (2022) Digital Language Learning framework, which emphasises the contribution of cognitive and behavioural engagement to language development during informal digital activities. They also support Sockett's (2023) account of informal language learning in the 'digital wild', suggesting that regular engagement with English in everyday online interactions may facilitate implicit second language acquisition, even in the absence of deliberate learning objectives. However, the findings reflect students' perceptions of their progress and do not, in themselves, establish a causal relationship between digital exposure and improvements in English proficiency.

6.3 The Relationship Between Digital Language Exposure and English Language Proficiency

Quantitative analysis reveals statistically significant positive correlations between English proficiency and exposure metrics, led by perceived improvement ($r = 0.48$, $p < .01$), daily duration ($r = 0.41$, $p < .01$), online usage frequency ($r = 0.36$, $p < .01$), and AI tool usage ($r = 0.33$, $p < .05$). Mean proficiency scores scale progressively with exposure duration, rising from 10.8 among low-exposure users (<1 hour) to 14.7 among high-exposure users (3–4 hours), while sub-scores favor vocabulary mastery (mean 5.2/8) over formal grammar (mean 3.8/6). These findings validate Emergentist SLA theory, demonstrating that linguistic competence dynamically emerges through cumulative exposure, frequency, and associative pattern building. The stronger performance in vocabulary over grammar mirrors extramural SLA literature, showing that informal digital input enriches lexical repertoires more effectively than structural syntax. Furthermore, peer corrections in WhatsApp chats support Long's Interaction Hypothesis, while AI-assisted text composition engages Swain's Output Hypothesis by prompting learners to notice structural gaps.

7. Conclusion

From an Emergentist perspective, this study examined the role of digital language exposure in English language acquisition among selected undergraduate students in a university in Kumasi, Ghana. The findings contribute to understanding how everyday digital communication shapes students' English language development. The study's central argument is supported by the findings: being online does not automatically improve English. What matters is what students actually do with English when they are online. Students who actively engage with English in digital spaces—reading, writing, responding, and asking questions—show stronger proficiency than those who simply scroll past English content without interacting. The Emergentist perspective provides a useful explanation for these findings.

In terms of language and digitalization, students usually go through a virtuous cycle. First, they encounter English repeatedly in digital environments. Then, they notice some words and structures. After that, they use them in interaction. They encounter them again. In all this, they may receive corrective feedback. Gradually, repeated patterns become part of their developing English system. This process is consistent with the study's findings on the roles of noticing, repetition, interaction, and emergent patterns. The Interaction Hypothesis adds that communication can make language more meaningful and noticeable. The Output Hypothesis shows that producing English can push learners to recognise gaps in their knowledge. Digital platforms can, therefore, create conditions in which input, interaction, noticing, repetition, and output work together. However, the study also reveals limitations. Most students do not intentionally use digital platforms for language improvement. Consequently, the English language those students encounter is predominantly informal, which may not adequately prepare them for academic English requirements. The key insight is clear: meaningful exposure, useful interaction, repeated contact, and actual language use are more likely to turn digital activity into language learning. Students, lecturers, and university authorities can all play various roles in making digital language exposure more productive.

8. Recommendation

The study recommends that students should cultivate intentionality during digital interactions by actively noticing new vocabulary, constructing full sentences, and using AI feedback to comprehend structural corrections rather than passively copying generated text. Again, university teachers ought to bridge informal digital practices with formal coursework by designing structured online tasks, facilitating collaborative digital writing, and systematically reinforcing key academic structures. University authorities should also establish frameworks for AI literacy and campus-wide technology access, while future research should conduct longitudinal studies examining generative AI and code-switching in multilingual higher education.

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