

CHAPTER IV

FINDINGS AND DISCUSSION

In this chapter, the results of the study are presented. The chapter is divided into two main sections; they are findings and discussion of the research. The findings present the results of data analysis collected through classroom observations and semi-structured interviews with ten English Education Department students. To enhance the credibility and trustworthiness of the findings, data triangulation was applied by comparing information obtained from classroom observations and interviews. The discussion deals with the interpretation of the findings in relation to the theoretical framework and previous studies.

A. Findings

This section presents the findings obtained from semi-structured interviews and classroom observations conducted with ten undergraduate students of the English Education Department. In accordance with the ethical considerations outlined in Chapter III, the participants are referred to using the pseudonyms Participant 1 through Participant 10 (hereafter P1–P10) throughout this chapter to protect their identities. The data collected reveals several key themes that emerged through thematic analysis, including the use of technology in academic writing, the benefits that students perceive from using technology, and the challenges they encounter when using these tools in their academic work. Each theme is presented in two sub-sections—interview findings and classroom observation findings—and is subsequently synthesised through data triangulation at the end of this section.

1. Use of Technology in Academic Writing

1) Interview Findings:

The interviews revealed that all ten participants (P1–P10) employed a variety of technological tools in their academic writing practices. These tools were reported as essential in helping the students improve the efficiency, quality, and collaborative aspects of their work. The tools most frequently reported by the participants can be grouped into four main categories, namely word processors, grammar and writing assistants, collaborative platforms, and supplementary reference and vocabulary tools. The detailed distribution of tools across participants is summarised in Table 4.1.

Table 4.1 Tools Used by Participants in Academic Writing

Participant	Primary Tools Used	Primary Purpose
P1	Microsoft Word, Grammarly, Google Docs	Writing, grammar checking, collaboration
P2	Microsoft Word, Google Translate, Google Docs	Writing, vocabulary lookup, collaboration
P3	Microsoft Word, Grammarly, QuillBot, Google Docs	Writing, grammar, paraphrasing, collaboration
P4	Google Docs, Grammarly	Daily drafting, grammar, collaboration
P5	Microsoft Word, online dictionaries	Writing, formatting, vocabulary
P6	Microsoft Word, Grammarly, Google Scholar, Google Docs	Writing, grammar, references, collaboration

P7	Microsoft Word, Google Docs	Writing, review features, collaboration
P8	Google Docs, Grammarly	Drafting, wordiness reduction, collaboration
P9	Microsoft Word, U-Dictionary, Google Docs	Writing, vocabulary expansion, collaboration
P10	Microsoft Word, Grammarly, Google Docs	Writing, grammar, collaboration, version tracking

Microsoft Word. Microsoft Word was the most widely used tool among the participants. All ten students (P1–P10) reported using Word for writing and editing their assignments. The participants particularly valued the spell-check, grammar-check, and auto-correct features, which they considered essential for ensuring that their writing was free from mechanical errors. P2, for instance, found Word’s auto-correct feature especially helpful in streamlining his writing process, while P5 appreciated the application’s paragraph formatting and document structuring capabilities. These features allowed the students to focus more on the content of their work rather than on technical issues.

Grammarly. Grammarly emerged as the second most popular tool, used by seven of the ten participants (P1, P3, P4, P6, P8, and P10, with P5 using it occasionally). The students employed Grammarly not only to check grammar but also to improve sentence structure and vocabulary. P1, for example, noted that Grammarly often pointed out structural issues such as incorrect passive or active voice usage, which enabled him to learn from his mistakes. Similarly, P8 credited Grammarly with improving her grasp of prepositions such as ‘in’, ‘on’, and ‘at’, while P4 reported that the application was instrumental in helping him understand the correct placement of punctuation marks. These accounts indicate that Grammarly functioned as both a corrective and an instructional tool

Google Docs. Google Docs was used extensively for collaborative writing activities, with nine of the ten participants (P1, P2, P3, P4, P6, P7, P8, P9, and P10) reporting positive experiences. The real-time editing feature allowed students to work together on a single document simultaneously, making it ideal for group projects. P1 highlighted the convenience of collaborating with peers from different locations without exchanging files manually, while P4 specifically praised the ability to leave comments directly on peers' text. P10 went further by noting that the version history feature allowed her to monitor each member's contribution, thereby preventing 'free-riders' in group assignments. P5 was the only participant who used Google Docs infrequently, as his groups typically preferred to have one person compile the final document in Word.

Supplementary Tools. Several participants also reported using additional digital tools to support their writing. P2 combined Word with Google Translate for finding suitable vocabulary, P3 used QuillBot for paraphrasing and for generating more academic sentence structures, P6 utilised Google Scholar for sourcing academic references, and P9 relied on the U-Dictionary application to quickly find synonyms and expand her vocabulary while writing. These supplementary tools were generally employed to address specific writing needs that the primary tools could not fully accommodate, such as translation, paraphrasing, citation discovery, and vocabulary enrichment.

2) Classroom Observation Findings:

In addition to the interview data, classroom observations provided further insight into the actual use of technology. These observations demonstrated how students integrate technology into their academic writing practices during class:

- a. Students predominantly used Microsoft Word for individual assignments, where the automatic formatting and editing tools were valued for speeding up the writing process.

- b. During group discussions and collaborative writing tasks, Google Docs emerged as the primary tool for sharing documents and collaborating in real-time. The ability to edit documents simultaneously and offer feedback instantly was a significant advantage for students working together on assignments.
- c. Grammarly was also used by some students to check their grammar, although some encountered challenges in fully understanding and utilizing the suggestions provided by the tool. *This observation is consistent with the interview data, where P1 stated, "I always start with Microsoft Word because it helps me structure my paragraphs properly," and P3 added, "Google Docs is essential for our group work since we can edit together in real-time without sending files back and forth." Furthermore, P4 explained, "Grammarly helps me check my grammar, but sometimes I do not really understand the suggestions it gives." These interview statements reinforce the observation that Microsoft Word, Google Docs, and Grammarly were the primary tools used by the students during classroom writing activities.*

2. Perceived Benefits of Using Technology

1) Interview Findings:

Students identified a range of benefits from the use of technology in academic writing. These benefits include improvements in writing efficiency, learning outcomes, accessibility, and collaboration. The interview data revealed that almost every participant associated their writing improvement with the regular use of digital tools, although the specific benefit cited varied from one participant to another. The detailed distribution of perceived benefits across participants is summarised in Table 4.2.

Table 4.2 Perceived Benefits Reported by Participants

Participant	Primary Benefit Reported	Specific Aspect Mentioned
P1	Writing efficiency, learning enhancement	Grammarly identifies passive/active voice issues; saves time
P2	Learning enhancement, writing efficiency	Red/blue underlines raise spelling awareness; auto-correct streamlines writing
P3	Writing efficiency, learning enhancement	QuillBot paraphrases into academic structures; Grammarly introduces new patterns
P4	Accessibility, learning enhancement	Auto-save feature reduces fear of data loss; Grammarly teaches punctuation
P5	Learning enhancement	Greater awareness of subject–verb agreement errors
P6	Writing efficiency, learning enhancement	Tools reduce revision time; Grammarly improves preposition use
P7	Writing efficiency	Review features and word-count tracker improve task management
P8	Learning enhancement, effective collaboration	Grammarly eliminates wordiness; improves grasp of prepositions
P9	Learning enhancement	U-Dictionary enriches vocabulary
P10	Writing efficiency, effective collaboration	Grammarly reduces anxiety; version history prevents free-riders

Writing Efficiency. The most consistently reported benefit was increased efficiency in the writing process. Tools such as Microsoft Word and Grammarly automated spelling and grammar checks, saving students significant time and effort. P1 explicitly stated that these tools ‘significantly save him time’, while P3 described

QuillBot as ‘highly time-saving’ because it provided alternative, more academic sentence structures when he struggled to articulate a thought. P10 similarly reported that Grammarly and Word were ‘highly efficient’ for detecting spelling errors. By reducing the mechanical burden of proofreading, these tools allowed the students to focus on the content, structure, and argumentation of their writing.

Learning Enhancement. Many participants regarded technology as an important educational tool rather than merely a corrective device. P1 explained that Grammarly helped him recognise structural issues such as incorrect passive or active voice, which boosted his confidence when submitting assignments. P2 observed that the red and blue underlines in Word made him more aware of his spelling errors and helped him learn to avoid them. P4 credited Grammarly with improving his understanding of punctuation, particularly the placement of commas and periods. P6 and P8 both highlighted improvements in their use of prepositions, while P5 reported becoming more aware of frequent subject–verb agreement errors. P9 noted that the U-Dictionary application had directly enriched her vocabulary. These accounts indicate that technology served as a continuous source of implicit grammar and vocabulary instruction.

Accessibility and Convenience. Another benefit frequently mentioned by the participants was the flexibility that digital tools offered. Because Microsoft Word, Grammarly, and Google Docs could be accessed on different devices, the students were able to work from home, the library, or any other location. P4 specifically valued Google Docs for its automatic saving feature, which alleviated the fear of losing work due to hardware failures. This flexibility enabled the students to manage their time more effectively and to complete assignments in a more convenient manner, as they were no longer tied to a single device or location.

Effective Collaboration. Google Docs was consistently reported as the most valuable tool for collaborative writing. The real-time editing feature allowed all group members to access, edit, and comment on a single document simultaneously. P1 emphasised the convenience of working with peers from different locations

without exchanging files manually, while P4 highlighted the ability to leave comments directly on peers' text as a standout feature. P10 added that the version history feature allowed her to see exactly who contributed to the work, preventing issues with 'free-riders' in group assignments. These accounts suggest that Google Docs not only facilitated technical collaboration but also promoted accountability and equitable participation within groups.

2) Classroom Observation Findings:

Observations in the classroom further validated the benefits identified in the interviews. Students expressed satisfaction with the efficiency and convenience of using Microsoft Word, particularly for error correction and formatting. They found that this tool allowed them to focus more on the writing process itself, as technical errors were automatically corrected.

Additionally, Google Docs proved to be an invaluable tool for group work. Students indicated that it made communication and collaboration much smoother, as they could instantly review and provide feedback on each other's work, leading to more productive discussions and improvements in the final output.

Finally, many students reported feeling more confident in their academic writing, knowing that they had access to tools that could help them structure their writing properly and eliminate technical mistakes. This confidence resulted in higher-quality assignments. *This finding was supported by interview statements from the participants. P1 noted, "These tools significantly save me time when writing academic assignments," while P10 explained, "Grammarly is highly efficient for detecting spelling errors that I might miss." P4 further stated, "The auto-save feature in Google Docs reduces my fear of losing work due to hardware failures," and P10 added, "The version history feature allows me to monitor each member's contribution, preventing free-riders in group assignments." These interview*

statements confirm the observed benefits of technology in enhancing writing efficiency, learning outcomes, and collaborative writing among the students.

3. Challenges Faced in Using Technology

1) Interview Findings:

Despite the numerous benefits reported, the participants also faced several challenges when using technology for academic writing. The interview data revealed five recurrent categories of challenges, namely (a) dependency on technology, (b) difficulty with advanced software features, (c) technical issues, (d) digital distractions, and (e) concerns about accuracy. It is worth noting that most participants reported experiencing more than one type of challenge simultaneously. The detailed distribution of challenges across participants is summarised in Table 4.3.

Table 4.3 Challenges Reported by Participants

Participant	Type of Challenge	Specific Issue Reported
P1	Dependency, advanced features, technical, distraction	Grammarly dependency; lacks Mendeley skill; slow internet; WhatsApp
P2	Dependency, advanced features, technical, distraction	Uneasy without cues; struggles with TOC; laptop lag; YouTube
P3	Dependency, technical, distraction	Struggles in handwritten exams; internet quota; Instagram
P4	Dependency, advanced features, technical, distraction	Deadline-driven dependence; References feature confusing; plugin crash; online gaming
P5	Dependency, technical, distraction	Reliance on auto-correct; aging laptop; TikTok

P6	Dependency, advanced features, technical, distraction	Insecure without Grammarly; Zotero integration; internet outage; WhatsApp groups
P7	Accuracy, technical, distraction	Auto-correct alters meaning; update prompts; social media
P8	Dependency, advanced features, technical, distraction	Reduced independent analysis; Track Changes confusing; unstable connection; YouTube
P9	Dependency, advanced features, technical	Vocabulary limited without dictionary; thesis formatting; short battery life
P10	Dependency, technical, distraction	Cannot construct long sentences alone; Wi-Fi reliance; Shopee

Dependency on Technology. Almost all participants admitted to having developed some degree of dependence on technological tools. P1 confessed that he felt ‘highly dependent’ on Grammarly to the point of feeling uncertain about the accuracy of his writing when the application was unavailable. P2 acknowledged that without the automated visual cues provided by Word, he felt uneasy and tended to be less meticulous when proofreading his own work. P3 described a more severe form of dependency, admitting that he often typed rapidly without concern for errors, a habit that left him struggling during handwritten in-class exams. P6 and P8 both reported feeling insecure about their writing capabilities when Grammarly was not functioning, while P10 explicitly stated that she found it difficult to construct long, complex English sentences without the assistance of these tools. P5 also acknowledged a significant reliance on the automatic spelling-correction features. These accounts indicate that excessive reliance on automated feedback may hinder the development of independent editing skills.

Difficulty with Advanced Features. Several participants struggled to utilise the advanced features of the writing tools they used. P1 acknowledged a lack of

proficiency with Mendeley for reference management within Word, while P2 reported recurring difficulties with generating automated tables of contents, which often resulted in formatting issues. P4 found the References feature within Word to be confusing and difficult to master, P6 struggled with integrating Zotero with Microsoft Word, P8 reported difficulties in using the Track Changes feature, and P9 specifically struggled with the advanced formatting and layout features required for formal documents such as a thesis. These difficulties indicate a clear need for additional training in advanced software functionalities.

Technical Issues. Technical and infrastructural problems were reported by every participant, although the specific issues varied. P1 cited slow internet connectivity, which particularly affected the performance of Google Docs. P2 reported that his laptop lagged when multiple tabs were open for research while writing. P3 identified running out of internet data quota as his primary obstacle, which prevented him from accessing Grammarly. P4 occasionally experienced issues with the Grammarly plugin crashing and slowing down Word. P5's main constraint was an aging laptop that struggled to run heavier applications smoothly. P6 reported sudden internet outages, P7 was frustrated by untimely software update prompts that interrupted her workflow, P9 was concerned about her laptop's short battery life, and P10 emphasised her dependence on Wi-Fi, the lack of which significantly disrupted her work. Collectively, these issues point to a persistent digital divide that affects the effectiveness of technology integration.

Digital Distractions. The interviews also uncovered a category of challenges that was not directly observable during classroom sessions, namely digital distractions. P1 was frequently distracted by WhatsApp notifications and resorted to turning off his mobile data to maintain focus. P2 and P8 both identified YouTube as their primary source of distraction, while P3 cited Instagram, P4 reported online gaming, P5 reported TikTok, P6 mentioned university cohort WhatsApp groups, and P10 admitted to engaging in online shopping on Shopee when facing writer's block. P7 was distracted by general social media notifications, while P9 felt she managed her time well enough to avoid major distractions. These findings suggest

that, although digital tools facilitate writing, they also expose students to a wide range of attention-fragmenting stimuli that can undermine productivity.

Concerns About Accuracy. A smaller number of participants expressed concerns about the accuracy of technologically assisted writing. P7 was the most explicit, noting that auto-correction tools occasionally altered the intended meaning of her words, which necessitated double-checking. As a result, she preferred to consult physical textbooks for grammar rules rather than relying entirely on digital feedback. This concern, although less prevalent than the other challenges, indicates that students are not passive consumers of technological assistance and that some remain critically aware of its limitations.

2) Classroom Observation Findings:

Classroom observations revealed several technical and logistical challenges that students face when using technology for writing tasks:

- a. **Technical Issues:** Some students experienced problems with the functioning of tools like Microsoft Word, including glitches in the spell-check and grammar-check features. Additionally, issues such as slow software performance or technical malfunctions disrupted students' writing processes.
- b. **Insufficient Training:** Many students indicated that they had not received comprehensive training in using the various tools available to them. As a result, they sometimes struggled to use the full range of features offered by these tools, especially the advanced functions that could enhance their writing.
- c. **Unstable Internet Connections:** One of the most common challenges was unreliable internet connectivity. This problem was particularly evident when using Google Docs for collaborative writing, as a stable internet connection is essential for real-time collaboration. Interruptions in the connection often led to delays and hindered the smooth progress of group

work. These observed challenges were further elaborated by the participants during the interviews. P1 admitted, “I feel highly dependent on Grammarly to the point of feeling uncertain about my writing when it is unavailable,” while P3 confessed, “I often type rapidly without concern for errors, which leaves me struggling during handwritten in-class exams.” P1 also reported, “Slow internet connectivity particularly affects the performance of Google Docs,” and P5 shared, “My aging laptop struggles to run heavier applications smoothly.” P2 added, “I was not received comprehensive training in using the various tools available to me, so I sometimes struggle to use the full range of features offered by these tools.” These interview statements provide deeper insight into the technical and psychological challenges that students experience when using technology for academic writing.

4. Data Triangulation

To enhance the credibility and trustworthiness of the findings, data triangulation was applied by comparing the information obtained from the semi-structured interviews with that gathered through classroom observations. As stated in Chapter III, Cohen et al. (2018) argue that triangulation increases the validity of qualitative research findings by using multiple sources of evidence. The result of this triangulation process is summarised in Table 4.4, which compares the two data sources for each of the three themes presented above and indicates whether they converge, diverge, or complement one another.

Table 4.4 Data Triangulation across Themes

Theme	Interview Findings	Observation Findings	Convergence / Divergence	Interpretation
1. Use of Technology	All ten participants use	Students predominantly	Convergence	Both sources confirm MS

	MS Word; 7 use Grammarly; 9 use Google Docs; some use supplementary tools (QuillBot, Google Translate, U-Dictionary, Google Scholar).	used MS Word for individual work and Google Docs for collaborative tasks; Grammarly used by some students.		Word, Grammarly, and Google Docs as the dominant tools. Interview data adds the supplementary tools not always visible in class.
2. Perceived Benefits	Benefits reported include efficiency, learning enhancement, accessibility, and effective collaboration.	Observed satisfaction with Word for error correction; Google Docs enabled smooth group work; students appeared more confident.	Convergence	Observation validates the efficiency and collaboration benefits reported in interviews. Confidence gains were observable in students' engagement.
3. Challenges Faced	Five challenge categories reported: dependency, advanced features, technical issues, digital distractions,	Three challenge categories observed: technical issues, insufficient training, unstable internet.	Partial convergence + complementarity	Technical and training challenges converge. Distractions and psychological dependency were interview-only, revealing dimensions not

	accuracy concerns.			observable in class.
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Table 4.4 Data Triangulation across Themes

Based on the triangulation presented in Table 4.4, it can be concluded that the interview and observation data largely converge with regard to the types of technological tools used by the participants and the benefits they perceived. Both data sources confirmed that Microsoft Word, Grammarly, and Google Docs were the dominant tools in EFL writing activities and that these tools contributed positively to writing efficiency and collaboration. However, the triangulation also revealed an area of complementarity: while classroom observations captured technical and training-related challenges, the interview data uncovered psychological and cognitive dimensions—such as dependency, anxiety, and digital distractions—that were not directly observable in the classroom setting. This highlights the value of using multiple data sources to obtain a comprehensive understanding of the role of technology in EFL writing.

The triangulation process revealed a strong convergence between interview and observation data with regard to the types of tools used and the role of Google Docs in supporting collaborative writing. Both data sources confirmed that Microsoft Word was the primary tool for individual writing tasks, while Google Docs was the preferred platform for group work. The observations also corroborated the participants' reports that Grammarly was used to check grammar, although several students were observed to experience difficulty in interpreting the suggestions provided by the tool, a finding that aligns with the interview statements of P1, P4, and P8 regarding advanced features.

A second area of convergence concerned the technical and infrastructural challenges. Unstable internet connectivity, hardware limitations, and software glitches reported in the interviews were directly observed during classroom sessions, particularly when students attempted to engage in real-time collaborative writing. This convergence reinforces the conclusion that the digital divide remains a significant barrier to effective technology integration in EFL writing contexts, even in environments that have already adopted digital tools in their teaching and learning processes.

The triangulation process also revealed an important area of divergence. Digital distractions, which were spontaneously reported by nine of the ten participants during the interviews, were not directly observable during classroom observations. This divergence is not contradictory; rather, it reflects the controlled nature of the classroom environment, in which the presence of the lecturer and peers naturally limits engagement with social media, online shopping, or gaming. The interview data therefore provided access to an aspect of the students' writing experience that the observation data could not capture.

A further complementarity between the two data sources emerged with regard to the psychological and cognitive dimensions of technology use. Feelings of dependency, insecurity without Grammarly, and anxiety about lecturer feedback—reported by P1, P3, P6, P8, and P10—could not be directly observed in the classroom. Conversely, the observation data captured actual behaviours, such as the simultaneous editing of Google Docs by group members and the spontaneous use of Grammarly during individual writing, which validated the participants' interview accounts. Taken together, the two data sources provide a more complete and credible picture of the role of technology in EFL writing than either source could have offered alone.

B. Discussion

The findings of this study indicate that technology has become an integral part of EFL students' writing practices. Rather than functioning merely as a supporting tool, technology has transformed the way students plan, compose, revise, and edit their academic writing. The participants' experiences—evidenced by the fact that all ten students (P1–P10) used Microsoft Word, that seven relied on Grammarly, and that nine engaged with Google Docs for collaborative work—suggest that digital tools have altered traditional writing processes by providing immediate access to language support, collaborative environments, and writing resources. This transformation reflects the growing influence of technology in language learning environments, where students increasingly rely on digital platforms to facilitate their academic tasks. The findings imply that technology is no longer viewed as an optional resource but as a fundamental component of modern EFL writing instruction.

The significant role of technology identified in this study can be explained through Vygotsky's Sociocultural Theory (1978), which emphasises that learning occurs through interaction with mediating tools and social environments. In the context of this study, applications such as Grammarly, Microsoft Word, and Google Docs functioned as mediational tools that assisted students in completing writing tasks more effectively. The interview data provided concrete evidence of this mediation: P1 explained that Grammarly pointed out structural issues such as incorrect passive or active voice, P3 reported that QuillBot suggested more academic sentence structures, and P5 noted that Word helped him format paragraphs and structure documents. These digital tools provided support that enabled students to perform writing activities beyond their current level of competence. Through technological mediation, students were able to identify grammatical errors, revise sentence structures, and organise ideas more efficiently. Therefore, technology acted as a scaffold that facilitated the development of students' writing abilities within their Zone of Proximal Development (ZPD).

Furthermore, the findings demonstrate that technology contributed to reducing the complexity of the writing process. This finding aligns with the Cognitive Load Theory proposed by Sweller (2011), which argues that instructional tools can reduce unnecessary cognitive demands and allow learners to allocate more mental resources to higher-order thinking tasks. In EFL writing, students often struggle simultaneously with grammar, vocabulary, organisation, and content development. The interview data illustrated this reduction clearly: P3 described QuillBot as ‘highly time-saving’ because it offered alternative academic sentence structures when he struggled to articulate a thought, while P1 reported that the automated spelling and grammar features of Word and Grammarly saved him significant time. By automating certain mechanical aspects of writing, technology reduced the burden associated with language accuracy, enabling students to focus more on generating ideas and constructing meaningful arguments. Consequently, technology helped students manage cognitive resources more effectively during the writing process.

Another important aspect emerging from this study is the role of technology in promoting learner autonomy. The availability of digital writing tools enabled students to independently identify and correct their mistakes without relying exclusively on teacher feedback. This finding supports the argument of Benson (2013), who states that technology can enhance learner autonomy by providing opportunities for self-directed learning. P2, for example, reported learning to avoid spelling errors through the visual cues provided by Word, while P4 explained that Grammarly helped him understand the placement of punctuation marks without external assistance. However, the triangulated data also suggest that this autonomy remains partial: P1, P3, P6, P8, and P10 explicitly admitted feeling dependent on these tools, with P3 even reporting that he struggled during handwritten exams. Through independent engagement with writing technologies, students became active participants in their own learning process, yet their autonomy appears to depend heavily on the continued availability of the tools themselves.

The findings also highlight the importance of collaborative technologies in supporting writing development. Platforms such as Google Docs enabled students to engage in collaborative writing activities, exchange ideas, and provide feedback to their peers. The interview data provided specific evidence of this collaborative dimension: P4 highlighted the ability to leave comments directly on peers' text, while P10 emphasised the version history feature that allowed her to monitor each member's contribution and prevent 'free-riders'. P1 also reported positive experiences of working with peers from different locations without exchanging files manually. This finding is consistent with the sociocultural perspective that knowledge is co-constructed through interaction with others (Vygotsky, 1978). Collaborative writing environments encourage students to negotiate meaning, discuss linguistic choices, and reflect on alternative ways of expressing ideas. As a result, learning becomes a socially mediated process rather than an isolated activity.

Despite these benefits, the findings reveal that students' dependence on technological tools may create unintended consequences. While applications such as Grammarly provide valuable assistance, excessive reliance on automated feedback may reduce opportunities for students to develop independent editing skills. This issue can be interpreted through the lens of metacognitive learning theory, which emphasises the importance of learners' ability to monitor and regulate their own cognitive processes (Flavell, 1979). The interview data provided clear evidence of this dependency: P1 felt uncertain about his writing when Grammarly was unavailable, P6 felt insecure when the tool was not functioning, P8 reported a decrease in her independent sentence-analysis skills, and P10 found it difficult to construct long, complex English sentences without assistance. Notably, P7 stood out as an exception: she reported that auto-correction tools occasionally altered the intended meaning of her words, prompting her to double-check the results and consult physical textbooks. When students rely heavily on technology to identify errors, they may become passive recipients of corrections rather than active evaluators of their writing.

The findings further indicate that technological challenges remain significant barriers to effective technology integration. Issues such as unstable internet connections, software limitations, and insufficient training affected students' ability to utilise digital tools optimally. The interview data concretised these barriers: P1 reported slow internet connectivity, P3 cited the frequent exhaustion of his internet data quota, P5 struggled with an aging laptop, P9 was concerned about short battery life, and P10 emphasised her complete dependence on Wi-Fi. These findings support previous research by Norris (2022), which highlights the continuing impact of the digital divide on educational opportunities. Although technology offers considerable potential for enhancing learning outcomes, unequal access to technological resources may limit its effectiveness. Therefore, successful integration of technology depends not only on the availability of digital tools but also on adequate infrastructure and institutional support.

In addition, the findings suggest that digital literacy plays a crucial role in determining the effectiveness of technology use in academic writing. Students who possessed stronger digital literacy skills appeared more capable of utilising advanced technological features and evaluating digital resources critically. The interview data revealed specific gaps in this area: P1 struggled with Mendeley for reference management, P2 with generating automated tables of contents, P4 with the References feature in Word, P6 with Zotero integration, P8 with the Track Changes feature, and P9 with the advanced formatting required for a thesis. These difficulties indicate that digital literacy encompasses more than the ability to operate basic word-processing functions; it also includes the capacity to integrate specialised academic tools into the writing workflow. This finding is consistent with the work of Ng (2012), who argues that digital literacy encompasses not only technical competence but also the ability to access, evaluate, and apply information effectively. Consequently, improving students' digital literacy should become a priority in higher education institutions seeking to maximise the educational benefits of technology.

The results of this study also support previous empirical findings regarding the positive relationship between technology use and writing performance. Yilmaz (2017) reported that technology-enhanced writing instruction improved students' writing proficiency and motivation. Similarly, Alghamdi and Alghamdi (2018) found that technological tools facilitated writing development by providing immediate feedback and increasing student engagement. The findings of the present study reinforce these conclusions by demonstrating that students perceive technology as a valuable resource for improving writing quality, enhancing efficiency, and supporting collaborative learning. The convergence of interview and observation data on the dominant role of Microsoft Word, Grammarly, and Google Docs further strengthens the argument that technology can positively influence EFL writing when implemented appropriately.

Overall, the findings suggest that the role of technology in EFL writing extends beyond technical assistance. Technology functions as a cognitive, social, and pedagogical tool that shapes students' learning experiences and writing development. However, its effectiveness depends on how it is integrated into the educational environment. The triangulated data presented in this chapter show that while technology enhances efficiency, facilitates collaboration, and supports self-directed learning, it also introduces risks of dependency, exposes students to digital distractions, and is constrained by infrastructural and digital-literacy gaps. Technology should not be viewed as a substitute for critical thinking, teacher guidance, or language learning processes. Instead, it should be regarded as a complementary resource that supports students in developing both linguistic competence and independent learning skills. Therefore, educational institutions and instructors should focus not only on providing access to technology but also on fostering the digital literacy, critical thinking, and self-regulatory skills necessary for students to use technology effectively in academic writing.