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**The Impact of Auto-Correction Tools on the Written Spelling Skill among Students of  
English**

**Case of First-Year Masters' Students of Linguistics at the University of Bejaia**

**A thesis submitted in partial fulfilment of the requirements for the degree of Master in  
Linguistics**

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## **DEDICATION**

I express my heartfelt gratitude to my friends who have walked with me in my academic journey and I extend my gratitude to my family members and especially my parents for their support and patience.

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This thesis acknowledgement is a tribute to all the people who have made my academic journey worthwhile.

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## ABSTRACT

Mobile auto-correction tools (MACT) have transformed written communication, but concerns persist regarding their impact on spelling accuracy and writing proficiency, particularly among students. This study investigates MACT's influence on spelling performance and writing skills among 23 first-year Master's students of English linguistics at the University of Bejaia. Using a pre-test and post-test method, participants were assessed on spelling proficiency, with the pre-test allowing access to MACT and the post-test restricting external resources. The analysis revealed an increase in spelling mistakes in the post-test, especially in orthographic spelling and cross-linguistic influence errors. While MACT aids immediate spelling correction, it also fosters dependency and long-term spelling errors when unavailable. Notably, the standard deviations of the pre-test and post-test showed no significant difference, which indicates consistency in spelling errors across both tests. This lack of differentiation in standard deviations raises questions about the generalizability of the findings and suggests that our hypothesis, predicting a significant impact of MACT on spelling skills, was not confirmed. This highlights the need for strategies to mitigate dependency and promote independent spelling skills among language learners relying on MACT. Considerations for future research include larger sample sizes and extended study durations to capture more significant differences in spelling accuracy over time.

**Keywords:** Auto-correction, mobile auto-correction tools, spelling errors, spelling performance, writing skill.

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## LIST OF ACRONYMS

- **MACT:** Mobile Auto-Correction Tools
  
- **MAC:** Mobile Auto-Correction
  
- **ESL:** English as a Second Language

## General Introduction

### 1. Background Knowledge of the Study

With technology at its peak, and being the cornerstone of most tools for most fields, including academic and educational fields, it has provided humanity with the tool of Auto-corrector, being omnipresent in every device, whether fixed or portable, whenever one is about to write anything, the tool of auto-correction is attached to the keyboard and is visible on the screen. Products like Microsoft Word, Gmail, Google Docs, or Canva have the auto-correct program implemented in their text editors.

Every cell-phone has smart auto-correct and spell checkers that are attached above the keyboard that suggest the potential correction of the written input or another accurate version of it. This auto-correct program is available even offline when the users are not connected to the internet, which makes it inevitable for anyone who writes on any device.

Since these tools are prevalent and reachable to young learners and students within a fingertip, it is only natural that the users have adopted them, when conducting academic reports and research studies.

Today, after more than two decades since the release of smartphones, mobile devices have revolutionized how university students communicate and write. Among the tools students use, Mobile Auto-Correction is notable for helping with spelling and writing while typing. However, we need to understand how this tool affects spelling skills, which are crucial for language.

This research inquires on an exploration of the dynamics between Mobile Auto-Correction (MAC) and the written spelling proficiency of first-year master's students of English at the University of Bejaia. Our objective is to uncover the impact of this technology on specific aspects of spelling skills crucial for writing on paper.

Previous research has delved into the impact of auto-correction tools on students' spelling skills, shedding light on various aspects of their effectiveness. Rynning-Tønnesen (2023) highlighted significant differences in writing outcomes between handwritten and typewritten texts, hinting at the influence of digital tools on writing proficiency.

Moreover, Ismael et al. (2022) cautioned against the use of auto-correction tools, emphasising the need for targeted instruction and feedback to reinforce writing skills. Their findings advocate for a nuanced approach, viewing these tools as supplementary aids rather than replacements for explicit instruction in spelling and grammar.

Additionally, Amirouche and Zighaoui (2023) explored the relationship between students' perceptions and practices of using autocorrect and their spelling proficiency. Their study with third-year English students at Mohamed Seddik Ben Yahia University revealed a weak correlation between students' utilization of autocorrect and their spelling abilities, contributing to a deeper understanding of the impact of autocorrect on students' spelling skills.

Furthermore, Sanchez (2023) investigated the impact of auto-correction tools on the writing skills of HUMSS students. The study unveiled students' heavy reliance on auto-correction tools for various writing aspects, such as vocabulary generation, grammar checking, and spelling correction. The study cautioned against over-reliance, which can lead to dependency and hinder self-assessment skills.

These diverse research findings collectively contribute to our understanding of the complex relationship between auto-correction tools and students' spelling skills, highlighting the need for balanced and informed approaches in leveraging these technological aids in education.

## **2. Statement of the Problem**

Sanchez's (2023) research underscores a concerning trend among students, as they increasingly depend on MACT during writing tasks, leading to a noticeable decline in their ability to spell accurately without digital assistance. This overreliance on MAC tools raises significant concerns about students' autonomy in spelling, potentially compromising their proficiency in academic and professional settings. The intervention of auto-correct features, such as displaying correct spellings before students complete words, highlights the extent to which students rely on these tools to circumvent the cognitive processes involved in accurate spelling. This reliance on auto-correction features indicates a shift away from developing robust spelling skills independently, which can have adverse implications for students' language proficiency and overall communication abilities.

## **3. Purpose of the Study**

This study aims to explore how the use of MAC affects the written spelling skills of first-year master's students of English at the University of Bejaia. By examining the influence of this technology on spelling, we seek to enhance our understanding of the interaction between digital tools and the writing skills.

## **4. Research Question**

The research question of this study revolves around the impact of the MACT on the spelling skills of students and users in general.

1. How does the use of Mobile Auto-Correction impact the written spelling skills of first-year master's students of English at the University of Bejaia when they transition from digital to traditional paper writing?

## **5. Hypothesis**

We hypothesise that the daily use of MACT in digital writing contexts negatively impacts the written spelling skills of first-year master's students of English at the University of Bejaia when they transition to traditional paper writing. This impact is reflected in reduced accuracy, spelling inconsistency and potentially rendering students reliant on digital aids and less proficient in written communication.

## **6. Significance of the Study**

Understanding the impact of MACT on written spelling skills among students of English is important in learning more about the relationship between technology and language learning methods in education. Thus, we aim to understand how the use of MAC influences these specific written spelling skills among students of English. By doing so, we contribute to the ongoing conversation about the role of technology in shaping language skills.

This research is important for educators in the field of language learning through technology. It helps policymakers adapt teaching methods for students who use MAC. It also highlights the need for a balance between digital and language skills.

## **7. Methodology**

### **7.1 Population and Sample**

The study employed a purposive sampling technique to select participants from first-year master's students of linguistics as the population of interest. From this population, a sample size of 23 participants was selected for the study. This sampling strategy aimed to capture a representative subset of students who could provide insights into the research objectives without overwhelming the data collection process.

## **7.2 Research Design**

The research design employed for this study is a quasi-experimental design pre test and post test approach. This methodological approach facilitated the comparison of participants' performance levels when writing on digital softwares and when writing on paper with no access to the MACT. By using this design, the study aimed to evaluate the impact of the MACT on spelling proficiency among the participants by measuring, recording and categorizing and then comparing their spelling mistakes from both tests.

## **7.3 Procedures for Collecting Data**

Data collection procedures included the administration of both the pre-test and post-test. The pre-test was conducted online using Google Forms, facilitating efficient data collection. In contrast, the post-test was administered in a classroom setting, with participants writing their paragraphs on paper. These varied data collection methods were chosen to capture participants' written skills accurately in different contexts.

## **7.4 Structure of the Study**

This thesis is divided into four chapters. After a general introduction exposing the purpose and importance of this research, the first and second chapters are devoted to the theoretical part, background knowledge and literature review of the topics and variables. The first section for spelling and its important basics as an indispensable aspect in written skills, The second section dives into the auto-correction tools including the reported impact of auto-correction tools on students' written and spelling skills in general and how it affected their literacy productions.

The third chapter represents the beginning of the practical part of the research which deals with the methodology and the presentation of the main findings. The fourth chapter discusses the results, the limitations and the suggestions for further research on this topic. The



paper ends with a general conclusion where a summary of the key findings of the study are presented.

## **Chapter One**

### **The Spelling Skill**

#### **Introduction**

The University of Bejaia teaches English as a foreign language (EFL) where students are expected to master the four basic language skills; listening, speaking, reading, and writing. However, Students may face difficulties in spelling the skill when trying to produce a piece of writing.

The spelling skill is fundamental in effective written communication across various contexts, including academic, professional, and personal domains. Mastery of spelling not only enhances the clarity and coherence of written texts but also reflects a level of linguistic competence and literacy proficiency.

#### **1. Definition of Spelling**

Understanding the concept of spelling is fundamental in language studies. Spelling, as defined by Merriam-Webster (2024), is the forming of words from letters according to accepted usage. Hládek, Staš, and Pleva (2020) further elaborate that spelling is "the process of correctly forming words by using the appropriate sequence of letters according to the rules of a particular language" (p. 1670). Spelling errors, which are deviations from the correct spelling of words, can arise due to various factors such as cognitive issues, lack of knowledge, or typographical mistakes.

Effective spelling holds significant importance for language learners as it enables them to express their thoughts clearly in written form, ensuring that the intended meaning is accurately conveyed (International Journal of Applied Linguistics & English Literature, 2021).

#### **2. Types of Spelling**

Spelling skills encompass a range of factors that contribute to linguistic proficiency. Naymé and Salas (2020) highlight the influence of phonology, morpheme-to-grapheme

mappings, orthographic patterns, and word-specific orthographic patterns on spelling abilities. These elements form the basis of effective spelling strategies.

At the core of spelling proficiency lies phonemic spelling, crucial for navigating writing systems. Sampson (2018) underscores the significance of lexical-level spelling distinctiveness in shaping the suitability of a writing system for a given language. This distinction emphasizes the relationship between phonemic and lexical spelling in language structures.

The pedagogy of spelling education involves dynamic and active methodological strategies aimed at enhancing students' spelling competencies. Miyassarov and Chinibekova (2022) advocate for diverse approaches such as reading exercises, playful learning, spelling drills, dictations, mural activities, and orthographic storytelling to foster robust spelling skills among learners.

However, spelling performance exhibits variability across different task types and grade levels. Betzy et al. (2021) note that while second graders demonstrate higher spelling performance in exercises compared to dictations, sixth graders may display either higher or equal performance in dictations versus exercises. Moreover, spelling proficiency tends to diminish in compositional tasks, influenced by factors such as cognitive load and contextualization, which can impact the acquisition and application of spelling skills.

The following are the types of spelling based on common knowledge and linguistic principles widely accepted in language education and research. These types of spelling are well-known concepts taught in language courses, linguistics studies, and educational materials:

**2.1. Conventional Spelling:** The correct spelling of words in written form, adhering to standard rules and conventions in the language.

**2.2. Homophonic Spelling:** Spelling words correctly when they sound the same but have different meanings and spellings.

- Example: The words "their", "there" and "they're".

**2.3. Homographic Spelling:** Correctly spelling words that are spelled the same but have different meanings and pronunciations.

- Example: "lead" as a verb and "lead" as a noun.

**2.4. Morphological Spelling:** This involves spelling words accurately by understanding their word parts or morphemes. English words often consist of prefixes, suffixes, and root words, and morphological spelling relies on recognizing and correctly spelling these components.

- Example: The word "unhappiness" consists of the prefix "un-," the root word "happy," and the suffix "-ness." Morphological spelling involves correctly combining these elements to spell "unhappiness."

**2.5. Orthographic Spelling:** This relates to the correct spelling of words based on visual patterns and memory. It involves recognizing and recalling how words are spelled by their visual appearance, rather than sounding them out.

- Example: Knowing that the word "receive" has the letter combination "i" before "e" because of the orthographic pattern, even though the pronunciation suggests otherwise.

**2.6. Spelling Consistency:** This skill focuses on the ability to spell words consistently, particularly in avoiding common spelling errors. It involves adhering to established spelling rules and patterns in English.

- Example: Consistently spelling "friend" correctly instead of making errors like "freind" or "fiend," which can occur due to common spelling mistakes.

**2.7. Spelling Memory:** Spelling memory involves retaining and recalling the correct spelling of words when writing on paper, even when they are infrequently used. It pertains to the retention of proper spellings over time.

- Example: Being able to spell less commonly used words correctly, such as "accommodation," from memory when writing on paper, without relying on auto-correction or reference materials.

### 3. Importance of Spelling in Written Communication

Teaching spelling also supports reading and writing, and vice versa (Adoniou, 2016, p.11). Learning how words and language work contributes to vocabulary development. This, in turn, supports reading comprehension and enhances choices made when composing written texts. While it is acknowledged that spelling ability is not related to intelligence, poor spelling can affect performance across all areas of the school curriculum.

Moreover, Spelling holds significant importance in written communication as it enables the effective and persuasive expression of ideas (Kurbanov, 2023). It is a foundational skill for proficient writing and is indispensable for active participation in literate societies (Desoete & Van Vreckem, 2018). When students master spelling skills, they are better equipped to read and write proficiently, translating their thoughts and ideas into coherent written form (Goodman et al., 2015).

Research supports the effectiveness of spelling interventions using direct instructional methods, which are instrumental in teaching accurate spelling. This accuracy is essential not only for personal reflection and creativity but also for fostering effective communication (Daffern et al., 2017). Furthermore, spelling plays a role in shaping national and social identities, delineating languages, and authenticating or stigmatizing speaker groups (Aravena et al., 1997). The use of standardized spellings is associated with linguistic authority, while deviations from these standards can carry sociolinguistic stigmas. This underscores the significance of spelling in shaping linguistic and social landscapes.

Spelling plays a crucial role in various aspects of our lives, with implications extending beyond linguistic correctness. Best (2017) emphasizes the importance of spelling despite the prevalence of autocorrect and spelling software in society. This assertion is grounded in the understanding that spelling proficiency directly impacts communication, literacy, and employment opportunities. As communication increasingly relies on digital platforms, even minor spelling errors can lead to significant misunderstandings or misinterpretations.

Moreover, in the professional realm, spelling errors on resumes or CVs can detrimentally affect one's chances in the competitive job market, especially with Applicant Tracking Systems (ATS) scrutinizing applications for precision. Furthermore, the perception of trustworthiness is intertwined with spelling accuracy, as typos or errors in written materials may signal carelessness or unprofessionalism. Therefore, spelling proficiency remains a fundamental skill, essential for effective communication, literacy development, and professional success in today's digital age.

In conclusion, spelling is a fundamental skill that contributes significantly to effective written communication and literacy development.

#### **4. Spelling and the Development of Communication Skills**

Effective communication skills are crucial for individuals to engage successfully with the world around them. According to Best (2017), communication begins at an early stage with simple forms such as body language, gestures, and vocalizations. As learners progress and transition to verbal communication, they naturally acquire an early understanding of their native language's spoken form.

However, the transition from verbal expression to written communication introduces a more complex dynamic that necessitates a combination of observation and formal instruction. During this developmental stage, learners acquire foundational skills essential for successful written communication. These skills include the ability to recognize letters by sight, form associations between written patterns and vocal expressions, and understand the rules governing spelling and grammar.

The mastery of spelling is particularly significant as it forms the cornerstone of written communication. Proficient spelling enables individuals to accurately convey their thoughts, ideas, and messages in written form, facilitating clear and effective communication. Additionally, spelling proficiency contributes to literacy development by enhancing reading comprehension, vocabulary acquisition, and overall language skills.

In essence, Best suggests that spelling plays a pivotal role in the development of communication skills, bridging the gap between verbal expression and written communication and laying the groundwork for effective literacy and language development. Understanding the importance of spelling within the broader context of communication skills underscores its fundamental role in facilitating meaningful interaction and expression.

### **5. Factors Influencing Spelling Skills**

The development of spelling skills is influenced by a multitude of factors, each playing a significant role in shaping an individual's proficiency in this area. Key factors include phoneme awareness, which refers to the ability to recognize and manipulate individual sounds in words, and letter knowledge, which involves understanding the correspondence between letters and their sounds (Spencer, 2007). These foundational skills serve as crucial predictors of spelling proficiency, laying the groundwork for accurate word formation.

Moreover, cognitive abilities such as attention functions and verbal memory skills significantly contribute to spelling learning (Kast et al., 2011). Attention functions, including selective attention and sustained attention, play a pivotal role in maintaining focus during spelling tasks, while verbal memory skills aid in storing and retrieving spelling patterns effectively.

Handwriting skills also play a vital role, particularly in primary grades, impacting the efficiency and temporal course of word spelling (Lervåg & Hulme, 2010). The ability to form letters accurately and consistently contributes to the development of spelling accuracy and fluency, highlighting the interconnectedness of motor skills with spelling proficiency.

In addition to cognitive and motor components, word complexity further influences spelling difficulty and the acquisition of literacy skills (Pontart et al., 2013). Factors such as word frequency, phonemic length, orthographic depth (the consistency of letter-sound

mappings), and grapheme complexity contribute to the variability in spelling challenges encountered by learners.

Overall, these findings underscore the nature of spelling skills, encompassing cognitive, linguistic, and motor components. Understanding the interplay of these factors is essential for effective spelling instruction and literacy development, particularly for both native speakers and English as a Second Language (ESL) learners.

### **Conclusion**

The spelling skill is a fundamental aspect for effective communication and literacy development. Throughout this chapter, we have presented the definition of spelling, its various types, significance in written communication, role in communication skill development, and factors influencing spelling proficiency. In conclusion, the mastery of spelling is a foundational skill that underpins effective written communication, literacy development, and language proficiency. It is a process that requires engagement, practice, and a deep understanding of linguistic principles.



## **Chapter Two**

### **Auto-Correction Tools**

#### **Introduction**

One such innovation that has become ubiquitous in our daily interactions is auto-correct tools. These tools are designed to assist users in correcting spelling, grammar, and punctuation errors as they type, thereby enhancing the quality and accuracy of written communication.

#### **1. Definition of Auto-Correction Tools**

Auto-correction tools encompass a range of software and applications designed to identify and rectify typographical errors in text, including spelling, grammar, punctuation, and style inconsistencies. These tools, such as AutoCorrect, are integral features in various software applications that automatically correct common spelling errors and typos as users type (Lenovo).

Specifically, AutoCorrect functions within word processing programs like Microsoft Word by detecting misspelt words and employing algorithms to suggest and implement corrections in real-time (Terrell & Wigmore). It automatically corrects misspelt words and common typos in a document (Computer Hope, 2022).

Moreover, auto-correction tools extend beyond word processing software to encompass a broader context of software applications aimed at error detection and rectification (Marvin et al., 2023). DevX (2023) describes AutoCorrect as a software feature providing real-time suggestions and corrections, enhancing typing speed and accuracy by addressing typographical errors, spelling mistakes, and incorrect grammar within text input. This functionality is particularly beneficial in improving the readability and accuracy of written communication.

Auto-correct tools are not limited to desktop applications but have become ubiquitous features on smartphones, computers, and tablets (Benseddik, 2023). These tools are designed to save users time and effort by automatically correcting errors in spelling, capitalization, and

punctuation, thus improving the overall quality of written content. In the educational context, auto-correction tools play a significant role in language learning and writing enhancement (Sylvio Rüdian, Moritz Dittmeyer, and Niels Pinkwart, 2022). These tools offer learners control over their text, providing concrete feedback on errors and assisting in the development of language proficiency.

Additionally, EZTitles describes auto-correct tools as features that fix common typos and misspelt words as users type. These tools are designed to automatically correct errors without the need for user intervention, enhancing text accuracy and efficiency. Auto-correction features include functions like correcting words starting with two initial capitals, capitalizing the first letter of a sentence, and identifying sentence delimiters to ensure proper capitalization in text entry applications.

In summary, auto-correction tools serve as invaluable aids in enhancing text accuracy, efficiency, and readability across various digital platforms and educational settings.

## **2. The Role and Challenges of Auto-Correction Tools**

Auto-correction tools play a crucial role in enhancing text accuracy and efficiency by automatically correcting common typos and misspelt words as users type. These tools are utilised across various fields, including broadcast workflows, education, and workplace productivity, providing real-time corrections and improving writing quality (EZTitles; NAB Show, 2022). Moreover, they support individuals with writing challenges and help users learn from their mistakes to enhance their writing skills.

However, in the context of language learning, auto-correction tools face challenges in accurately identifying errors compared to human teachers, necessitating further development to enhance their effectiveness in educational settings (Sylvio et al., 2022).

In educational assessments, the role of auto-correction systems is to offer features such as easy test construction, automatic correction of answer sheets, and result display for efficient assessment and feedback (Buza, 2022).

Despite their benefits, auto-correction tools encounter limitations, such as difficulties in detecting and correcting baseband issues automatically and the need for manual intervention in certain correction processes. Moreover, they face complexity in correcting content stored in compressed formats within file-based workflows (Dittmeyer, Pinkwart, & Rüdian, 2022; Sanchez et al., 2023). Additionally, over-reliance on these tools may denote deficiencies in essential writing skills and lead to inaccuracies in handwritten compositions.

To address these challenges, targeted instruction, exercises, and a balance between utilizing auto-correction tools and developing essential writing skills are recommended. This approach ensures users develop mastery in vocabulary, syntax, and mechanics of writing.

### **3. Types of Auto-Correction Tools**

There are different types of auto-correct tools, each with its own functionality and level of sophistication. Here are a few types with examples:

**3.1 Basic Auto-Correct:** This type of auto-correction tool is commonly found in word processing software like Microsoft Word or Google Docs. It typically corrects spelling mistakes and basic grammatical errors as you type, often after a brief delay or after you complete a word or sentence. To illustrate their capabilities, the following are two examples of such tools to understand their capabilities better

a. Microsoft Word: Microsoft Word is a popular word processing software that includes a basic auto-correct feature. It corrects spelling mistakes and basic grammatical errors as you type, providing suggestions and corrections in real time or after completing a word or sentence.

According to Techno-Science, Microsoft Word is a word processing software developed by Microsoft, which also offers other word processing tools like Notepad and Microsoft

Works, but Word holds the prominent position as the company's flagship word processing software.

b. Google Docs: Google Docs is a cloud-based word processing application, also has a basic auto-correct feature. It automatically corrects spelling errors and basic grammar mistakes as you type, offering suggestions and corrections while you work on your document (Reguig & Mouffok, 2023).

According to Google, Google Docs is an online word processor that enables users to create, format, and collaborate on documents with others.

**3.2. Contextual Auto-Correct:** These tools go beyond basic spelling and grammar correction. They analyze the context of the text being typed to provide more accurate and contextually relevant suggestions. This includes predicting the next words based on the context of the sentence and offering more precise corrections and suggestions in real-time. To illustrate the advanced capabilities of contextual auto-correct tools, the following are two examples of such tools to understand their capabilities better

a. Grammarly: Grammarly is a popular contextual auto-correct tool that goes beyond basic spelling and grammar correction. It analyses the context of the text being typed and provides more accurate and contextually relevant suggestions. Grammarly can predict the next words based on the sentence context, offer precise corrections, and provide insights into writing style, tone, and clarity.

According to Grammarly, Grammarly is a platform designed to aid individuals in communicating confidently across devices and platforms by providing AI-powered suggestions to enhance correctness, clarity, engagement, and delivery of writing.

b. SwiftKey Keyboard: SwiftKey Keyboard is another example of a contextual auto-correct tool, particularly designed for mobile devices. It uses artificial intelligence to analyze the context of the text input and predicts the next words accurately.

SwiftKey offers personalized predictions based on your typing style, common phrases, and frequently used words, enhancing the overall typing experience on mobile devices.

According to Microsoft, Microsoft SwiftKey is a keyboard app that personalises autocorrect and predictions based on the user's writing style, incorporating commonly used words, phrases, and emojis.

**3.3 Adaptive Auto-Correct:** Some auto-correct tools learn from the user's typing behaviour and preferences over time. They adapt to the user's writing style, commonly used words, and patterns to provide more personalized and accurate corrections. These tools often improve their accuracy and efficiency with continued use. To illustrate, the following are two examples of such tools:

a. TextExpander: TextExpander is an adaptive auto-correct tool that learns from the user's typing behavior and preferences. It allows users to create custom abbreviations for frequently used phrases, sentences, or words. Over time, TextExpander adapts to the user's typing style and expands the abbreviations automatically, saving time and reducing typing errors.

According to Santos (2021), TextExpander is an app that enables users to summon up content with just a couple of keystrokes.

b. Microsoft SwiftKey: Microsoft SwiftKey is a keyboard app for mobile devices that employs adaptive auto-correction technology. It learns from the user's typing habits, including commonly used words, phrases, and writing style. SwiftKey adapts to the user's preferences, provides accurate predictions, and improves its auto-correction capabilities with continuous usage, enhancing the overall typing experience.

**3.4 Multilingual Auto-Correct:** Auto-correct tools designed for multilingual environments can handle corrections and suggestions in multiple languages simultaneously. They can switch between languages seamlessly based on the text being typed, providing accurate corrections and suggestions in each language:

a. Google Keyboard (Gboard): Gboard is a multilingual keyboard app developed by Google. It supports multiple languages and allows users to switch between languages seamlessly while typing. The auto-correct feature in Gboard adjusts to the selected language, providing accurate corrections and suggestions in each language without the need to switch keyboards manually.

"Gboard, also known as Google Keyboard, is the official keyboard app for Android devices offered by Google. It combines various common actions performed by smartphone users, such as typing, conducting internet searches, and sharing content, into a single tool" (Mishra, 2024).

b. LanguageTool: LanguageTool is a multilingual grammar and spell-checking tool that can be integrated into various applications and platforms. It supports multiple languages and offers auto-correction capabilities in each supported language. Users can input text in different languages, and LanguageTool will provide contextually relevant corrections and suggestions based on the selected language.

**3.5. Advanced Auto-Correct Algorithms:** Certain auto-correct tools incorporate advanced algorithms and artificial intelligence (AI) techniques. These algorithms can analyse not just the immediate context but also the broader context of the text, including grammar, syntax, semantics, and even user intent. They can offer more sophisticated corrections and suggestions, especially in complex or ambiguous language contexts. ProWritingAid is a perfect example of this auto-correct tool type.

ProWritingAid goes beyond basic spelling and grammar correction. It incorporates advanced algorithms and AI techniques to analyze various aspects of writing, including spelling, grammar, sentence structure, readability, style, and more. It provides comprehensive suggestions and feedback to help users improve their overall writing quality. This falls under the advanced algorithms category because it employs sophisticated analysis techniques to enhance writing beyond simple corrections. According to Capterra, ProWritingAid is a

software tool that checks grammar, improves writing style, and manages terminology to ensure exceptional writing quality. These are just a few examples, and there may be variations or combinations of these types in different auto-correct tools available today.

The mobile auto-correction tool (MACT) generally falls into the category of "Contextual Auto-Correct" tools. This type of auto-correct tool goes beyond basic spelling and grammar correction by analyzing the context of the text being typed. Mobile auto-correct tools use algorithms that consider the words already typed, the structure of the sentence, and the user's typing patterns to provide accurate and contextually relevant suggestions in real-time.

Unlike basic auto-correct tools that may wait until the end of a word or sentence to suggest corrections, mobile auto-correct tools are designed to predict and display correct words as they are being typed. They often incorporate predictive text technology, language models, and machine learning algorithms to improve the accuracy of suggestions and enhance the overall typing experience on mobile devices.

In summary, mobile auto-correct tools are part of the contextual auto-correct category due to their ability to understand and analyze the context of the text being typed, leading to more precise and contextually appropriate corrections and suggestions.

#### **4. The Functions of Auto-correction Tools**

Auto-correction tools operate based on predefined dictionaries, algorithms, language rules, and statistical models. They compare user input against a database of correct words and phrases, flagging and rectifying deviations from standard language conventions in real-time. These tools autonomously modify and correct user inputs, enhancing understanding and convenience by avoiding manual checking (Qingrong, 2012).

In terms of software, auto-correct software functions by identifying misspelt words and using algorithms to determine the intended words, subsequently editing the text accordingly. Equipped with various features and mechanisms, these tools enhance text entry accuracy and efficiency, commonly found in word processors, text editing interfaces for smartphones and

tablets, as well as in coding programs. Smartphone and device-based auto-correct programs typically suggest corrections for common typos and misspellings, aiming to save time and improve communication by catching errors that could alter the meaning of the text (TechTarget).

Auto-correct tools work by underlining misspelt words in red, allowing users to right-click and select the correct spelling from a list of suggestions. Users can also add their own words to the dictionary to avoid unrelated suggestions. These tools can be disabled or adjusted in settings to suit individual preferences. Additionally, auto-correct features can be used to automatically format text, insert special characters, and provide valuable corrective feedback for vocabulary, grammar, and punctuation (TechTarget; EZTitles.).

In the context of language learning, auto-correction tools help optimize written texts by proofreading, although they may not always accurately identify errors as human teachers do. These tools aim to enhance texts by proofreading but may not always align with the purpose of providing corrective feedback in language learning. Challenges exist in adjusting auto-correction tools for language learning, requiring improvements to address precision, recall, and the detection of errors that are not errors at all (Rüdian, Dittmeyer, & Pinkwart, 2022). According to Lenovo, AutoCorrect functions by comparing typed words with either an internal dictionary or a user-defined list, providing correction suggestions or applying them automatically when spelling errors or known typos are detected.

### **5. The Impact of Auto-Correction Tools on the Spelling Skill**

Auto-correction tools have revolutionised written communication by minimising errors, enhancing clarity, and improving overall writing quality. However, they also present challenges such as dependency, potential misinterpretation, and complacency in language skills. Ismael et al. (2022) found that auto-correction has a negative impact on the writing skills of students, particularly in terms of grammar errors, highlighting the need for educators



to be aware of the potential negative consequences of technology and auto-correction on students' writing skills.

Additionally, Rynning-Tønnesen (2023) conducted a comparative analysis of 8th graders' spelling and grammar in handwritten versus computer-written texts with autocorrect/grammar-checking software. The study found significant differences in both grammatical and orthographic accuracy between handwritten and typewritten texts, highlighting the impact of digital tools on student writing outcomes. The research recommended that teachers incorporate handwritten tasks and assignments in the English language classroom to better understand trends and challenges in students' English language development.

Furthermore, Amirouche and Zighaoui (2023) investigated the relationship between students' perceptions and practices of using autocorrect and their spelling proficiency, finding a weak correlation between students' utilization of autocorrect and their spelling abilities. This study contributes to a better understanding of the impact of autocorrect on students' spelling skills.

Moreover, Gholizadeh and Rahimi (2023) studied the mediating role of academic self-regulation in the relationship between autocorrect use and vocabulary size. The findings emphasized the importance of individualistic use of educational applications, such as autocorrect, in mobile-assisted language learning.

Despite these positive impacts, auto-correction tools also face challenges, particularly in the context of language learning. Challenges include limitations in detecting and correcting baseband issues automatically, the need for manual intervention in certain correction processes, and the complexity of correcting content stored in compressed formats within file-based workflows. Additionally, auto-correction tools may lead to over-reliance by users, denoting deficiencies in essential writing skills and inaccuracies in handwritten compositions (Sanchez, 2023). To address these challenges, targeted instruction, exercises, and a balance

between utilizing auto-correction tools and developing essential writing skills are recommended to ensure users develop mastery in vocabulary, syntax, and mechanics of writing (Dittmeyer et al., 2022).

In conclusion, auto-correction tools have varying impacts on spelling skills. They can indeed reduce errors in writing and enhance writing quality, but over-reliance on these tools may lead to dependency and deficiencies in essential writing skills.

### **Conclusion**

In this chapter about auto-correction tools we have provided the definition, types, functions, and challenges associated with these digital aids. Throughout the discussion, the role of auto-correction tools in enhancing text accuracy, efficiency, and readability across various platforms and educational contexts has been emphasized. In conclusion, auto-correction tools contribute significantly to text accuracy, efficiency, and language learning outcomes.

## **Chapter Three**

### **Research Methodology and Findings**

#### **Introduction**

This chapter is devoted to the description of the methodological design of our study and to the presentation of the general findings of our research. It focuses on the description of research design and the methodology used. It describes the population, the data collection tools and procedures.

#### **1. Research Design and Methodology**

##### **1.1. Design and Methods**

We adopted a quasi-experimental research design, deemed most fitting for our study's objectives. This design allowed us to closely examine the hypothesis outlined in our introduction, specifically evaluating the impact of mobile auto-correction tools on spelling proficiency among Master's students of English. The experimental setup enabled a direct assessment of the effectiveness of MAC tools and their influence on students' spelling accuracy. We designed a pre-test and post-test methodology to gauge spelling performance, with the pre-test that allowed us to measure and analyze spelling errors with mobile auto-correction tools and the post-test evaluating independent spelling skills without these aids. This approach ensured a focused investigation into the role of auto-correction tools in spelling development, aligning with our research aims and objectives.

##### **1.2. Population and Sample**

The sample population for this study comprises first-year master's students specializing in Linguistics within the Department of English at the University of Abderrahmane Mira Bejaia. The total number of students in the sample is 35, out of which 23 students actively participated in both the pre-test and post-test phases of the research. The selection of this particular population was based on their level of knowledge and experience, as first-year master's students are expected to possess a strong command of the English language and have

been nurtured in their earlier years to express themselves proficiently, including mastering spelling skills. There were no specific criteria for selection within the student cohort, and participation was voluntary, resulting in a diverse group that includes both male and female students who share the same educational background.

## **2. Data Collection Tools**

The research methodology relied on a pre-test and post-test as the primary tools for data collection. Participants were prompted to write narrative paragraphs on topics of their choice, which served as assessments for spelling errors. The pre-test were conducted digitally using Google Forms to ensure smartphone device usage, aligning with the study's focus on mobile auto-correction tools. The post-test, however, were administered in a classroom setting, requiring participants to write on paper without technological aids. This study is based on two main tests:

### **2.1. The Pre-test**

The pre-test phase was held on the digital environment of google forms, the link of the pre-test had been sent to the delegate who then shared it with the rest of the students with a notice stating that participation is voluntary and not obligatory. During the pre-test, the participants wrote narrative paragraphs. The topic selection was open-ended, allowing participants to choose subjects of personal interest. The pre-test aimed to establish a baseline assessment of spelling proficiency with the support of mobile auto-correction tools. The paragraphs were reviewed and the number of spelling errors made was counted and categorized.

### **2.2 The Post-test**

Following the completion of the pre-test phase, participants underwent the post-test assessment. Unlike the pre-test, which allowed the use of mobile auto-correction tools, the post-test was conducted in a controlled classroom environment without access to technological aids. Participants were given similar tasks of writing narrative paragraphs on

topics of their choice. The post-test aimed to evaluate participants' independent spelling skills without the assistance of auto-correction tools. Spelling errors were identified, counted, and categorized in the same manner as the pre-test to measure any changes in spelling proficiency after exposure to the experimental conditions.

### **3. Data Collection Process**

The data collection process for this study was focused on a pre-post-test methodology with written tasks for first-year master's students specializing in Linguistics. The decision to use a paragraph task for both the pre-test and post-test was a deliberate choice, aiming to provide a natural assessment of students' spelling skills without explicitly highlighting the study's focus on auto-correction tools.

One of the key aspects of this methodology was the emphasis on evaluating individuals' skills and performance in a setting that mirrors real-life situations. By prompting students to write paragraphs without specific spelling-related instructions or mentioning auto-correction tools, we aimed to capture their authentic spelling abilities and writing style. This approach not only allowed for an evaluation of students' skills but also avoided any potential bias or artificiality in the assessment process.

For the pre-test, participants accessed the digital assessment platform through Google Forms using their smartphones. They were required to write narrative paragraphs on topics of their choice within a specified time frame. The digital format allowed for efficient data collection and immediate submission of responses.

The post-test was administered in a controlled classroom environment during their methodology class, and without access to mobile devices or technological aids. Participants were asked to complete similar narrative paragraph tasks as in the pre-test. The absence of MACT during the post-test allowed for an assessment of participants' spelling skills without external assistance.

Throughout the data collection process, strict adherence to ethical guidelines and participant confidentiality was maintained. Participants were informed of their rights regarding data privacy and were assured of anonymity in reporting their responses.

The implementation of the paragraph task in the pre-test also offered several logistical advantages. It could be completed outside of regular class time, reducing the burden on both students and teachers during standard sessions. Additionally, clear instructions provided to all participants ensured consistency and standardization across the data collection process, contributing to the reliability of the results.

One of the critical benefits of this methodology was its ability to facilitate comparative analysis. By comparing the spelling accuracy of paragraphs written with and without auto-correction tools, we could directly measure the impact of these tools on students' writing skills.

Moreover, this methodology was designed to be efficient and considerate of time and resources. By integrating the assessment into the students' regular writing tasks, it eliminated the need for separate dictation or extensive error identification sessions. This streamlined approach not only facilitated efficient data collection but also ensured that the study's findings were both reliable and valid, reflecting the students' authentic writing abilities and their interactions with auto-correction tools.

## **4. Results**

In this section, we introduce the results obtained from the pre-test and the post-test from both the sample population.

### **4.1 The Pre-Test**

After sending the link of the google forms' pre-test, the delegate shared the link with their classmates of first years' master students of linguistics, the task was narrowed down precise and concise in order to avoid students' feeling overwhelmed when seeing the pre-test page, and thus making them ignore the task for perceiving it an additional burden to all of the real

time tasks and projects they had been given in class. The task was simplified and accompanied by a note indicating it would take no more than ten minutes. This encouraged participation and ensured students wrote naturally without resorting to external resources like dictionaries or artificial intelligence. In addition, we made sure that all the participants know that writing the pre-test paragraphs will not harm them in any manner, since writing these paragraphs will not affect their grades. Furthermore, this approach prevented the use of dictionaries, allowing students to rely on the MACT on their smartphones. This setup aimed to reveal the impact and unconscious dependency on these tools, which would be assessed in the post-test. The free choice of the paragraph subject was intentional to prompt them to participate instead of surrounding them with specific topics. Specifying topics could have caused some students more difficulty in expressing themselves than others.

The table below shows the results of the pre-test including the total number of errors. It gives more details about the errors made, the frequency number and the percentages of the spelling errors made.

Table 1: *Spelling Mistakes in Pre-test*

<b>Spelling Mistake Categories</b>	<b>Number of Spelling Mistakes</b>	<b>Percentage of Total Mistakes</b>
Homophonic Spelling Mistakes	0	0 %
Morphological Spelling Mistake	1	4.76 %
Orthographic Spelling Mistakes	1	4.76 %
Cross-Linguistic Influence Errors	1	4.76 %
Grammatical Errors	12	57.14 %
Typographical Errors	6	28.57 %
<b>Total</b>	<b>21</b>	<b>100 %</b>

Table 1: The present table provides an in-depth analysis of the spelling mistakes identified in the pre-test assessment, shedding light on the specific areas of challenge for participants. The categories of spelling mistakes encompass a spectrum of linguistic nuances, each contributing uniquely to the overall error profile.

Homophonic Spelling Mistakes were notably absent in the pre-test data, indicating a strong grasp of words that sound alike but have different meanings or spellings. However, Morphological Spelling Mistakes, Orthographic Spelling Mistakes, and Cross-Linguistic Influence Errors each occurred once (4,76% each), illustrating occasional challenges in word formation, visual representation, and language transfer across different linguistic backgrounds, respectively.

The most prevalent category of errors was Grammatical Errors, with 12 instances observed (57.14 %). These errors encompassed a range of syntactical, grammatical, and punctuation inaccuracies, highlighting areas where participants may benefit from focused grammatical instruction and practice.

Typographical Errors also featured prominently, with 6 instances noted (28.57%). These errors typically involve unintentional mistakes in typing or keyboarding, such as transposing letters or omitting characters, underscoring the importance of proofreading and editing skills in written communication.

This comprehensive analysis provides valuable insights into the specific types of spelling mistakes prevalent in the pre-test data, guiding instructional strategies and interventions aimed at enhancing spelling proficiency and linguistic accuracy among participants.

#### **4.2 The Post-Test**

One week after the pre-test link was sent to the students, the researcher had presented himself personally to the students of the first-year linguistics' classroom in the purpose of administering the post-test on table and in a real classroom environment. One week after distributing the pre-test link, the researcher personally administered the post-test to the



first-year linguistics students in their classroom. The task was simplified to encourage participation and allowed students to choose their own topics, ensuring fairness and equal challenge. Students were informed that their submissions would not affect their grades. Before administering the post-test, the researcher specifically told the students that it will not take more than ten minutes, which helped in encouraging them as well and convinced them to write naturally without the support of any external resource like smartphones or dictionaries.

The table 2 below shows the results of the post-test including the total number of errors. The table gives more details about the errors made when spelling words. It gives the frequency number and the percentages of the spelling errors made.

Table 2: *Spelling Errors in Post-Test*

<b>Spelling Mistake Categories</b>	<b>Number of Spelling Mistakes</b>	<b>Percentage of Total Mistakes</b>
Homophonic Spelling Mistakes	2	7.14 %
Morphological Spelling Mistake	1	3.57 %
Orthographic Spelling Mistakes	9	32.14 %
Cross-Linguistic Influence Errors	9	32.14 %
Grammatical Errors	7	25.00 %
<b>Total</b>	<b>28</b>	<b>100 %</b>

Table 2: The table above provides a comprehensive overview of the frequencies and percentages of spelling errors identified in the post-test assessment. These errors are categorised into distinct types of spelling mistakes, shedding light on the specific areas that require attention and improvement in spelling proficiency.

Upon analysis, it becomes apparent that orthographic spelling mistakes and cross-linguistic influence errors collectively account for the majority of spelling mistakes in

the post-test, with each category representing 32.14% of the total errors. These findings underscore the significance of orthographic accuracy and the impact of linguistic influences on spelling proficiency among learners.

Additionally, grammatical errors contribute significantly, comprising 25.00% of the observed mistakes. While grammatical errors are distinct from spelling errors, their prevalence suggests a need for integrated language instruction that addresses both spelling and grammatical aspects comprehensively.

On the other hand, homophonic spelling mistakes and morphological spelling mistakes, although less frequent in occurrence at 7.14% and 3.57% respectively, highlight specific areas where students may struggle with phonetic distinctions and word formation rules. These findings emphasize the importance of targeted remediation and instructional strategies tailored to address these nuanced spelling challenges.

By delineating the distribution of spelling errors across different categories, educators can tailor interventions, provide targeted feedback, and design instructional activities that effectively enhance spelling proficiency and overall language accuracy among learners.

### **Conclusion**

In this chapter we have described the methodological design of our study and we have presented the general findings of our research. The researcher focused on the description of research design and the methodology used. It described the population, the data collection tools and procedures. Then, we have presented the main findings of both the pre and post-tests.

## Chapter Four

### Discussion of the Findings

#### Introduction

This chapter provides a discussion of the results obtained from the pre-post-tests and it introduces the conclusion of the study. The researcher has compared between the results of the pre-test and post-test of the participants, and has deduced the final conclusion of the present research. In addition, this chapter presents the limitations of the study, implications and suggestions for further studies. At the end a general conclusion is made to summarize the whole findings of the study.

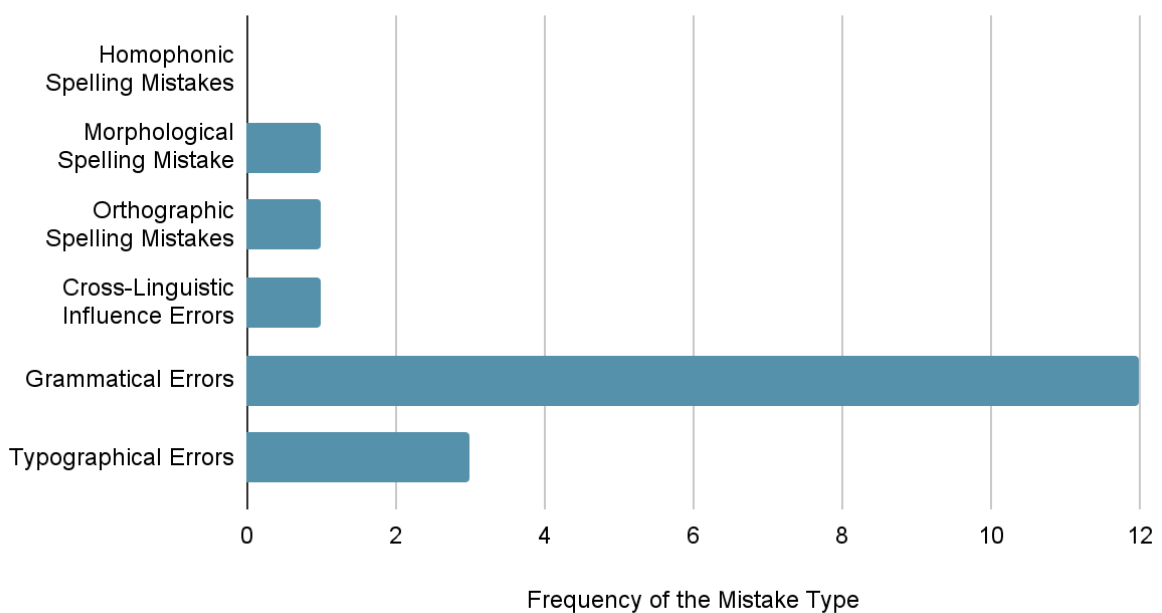
#### 1. Discussion of the Findings

This section is devoted to the discussion of the findings obtained from both tests.

##### 1.1 Discussion of the Pre-Test

The following graph shows the results of the pre-test including the total number of errors. It gives more details about the errors made, the frequency number and the percentages of the spelling errors made.

#### Spelling Mistake Categories



**Figure 1:** Findings of the pre-test

The pre-test analysis yielded valuable insights into the spelling proficiency and linguistic accuracy of the participants.

Notably, the absence of homophonic spelling mistakes, accounting for 0% of the total errors. Homophonic spelling is the correct spelling of words when they sound the same but have different meanings and spellings, and in the pre-test, the participants have not made a single error of this type. This proficiency underscores the participants' ability to navigate linguistic nuances effectively.

However, the occurrence of morphological spelling mistakes and orthographic spelling mistakes, each representing 4.76% of the total errors, indicates occasional challenges in word formation and visual representation, respectively. Morphological spelling involves spelling words accurately by understanding their word parts or morphemes. English words often consist of prefixes, suffixes, and root words, and morphological spelling relies on recognizing and correctly spelling these components. The participants wrote "slaves lived in appropriate living conditions" instead of "inappropriate".

Orthographic spelling relates to the correct spelling of words based on visual patterns and memory. It involves recognizing and recalling how words are spelled by their visual appearance, rather than sounding them out. It's about recalling the orthographic pattern and spelling the word accurately even if the pronunciation suggests otherwise, for instance, the participants wrote "an other" instead of "another". These errors highlight specific areas where participants may encounter difficulties in spelling accuracy, particularly in terms of morphological structures and orthographic conventions.

Additionally, the presence of cross-linguistic influence errors, also constituting 4.76% of the total errors, suggests challenges related to language transfer across different linguistic backgrounds. The fact that students have French as a second language and first foreign language in their school systems and that they have learned it since primary schools or even at home, has had an influence with the spelling of English words. Some participants wrote

"Americain people" which is the literal spelling of the word "American" in the French language. This is called language interference. This finding underscores the impact of participants' language experiences and backgrounds on their spelling abilities.

Furthermore, the most prevalent category of errors was grammatical errors, comprising 57.14% of the total errors. These errors encompassed a range of syntactical, grammatical, and punctuation inaccuracies, indicating areas where participants may benefit from focused grammatical instruction and practice.

The participants have used "keep your hard working" instead of "hard work", "to buy a new pant" instead of "to buy new pants", "she like the both" instead of "she liked both", "when we arrive at home my father yields on me" instead of "when arrived home". Moving to another phenomenon of grammatical errors, there was an unnatural usage and confusion of "its", "it's" and "it", this latter is the most frequent anomaly in text of the whole pre-test.

Participants have also made errors about the final "S" of the third person singular as in "it accept" instead of "it accepts" and "his father never spend time with him" instead of "spends". Mistaking the past and present tenses with "they knew about you" instead of "they know about you", "Applications provide in the play store" instead of "provided", "humans tend to use newspapers" instead of "tended" even when the writer has specified that he is talking about the past.

Furthermore, the omission of apostrophes in contractions, such as "have access to the world news" instead of "world's news", another instance of the omission of apostrophes in contractions is students using "be informed on what going on in the world" instead of "what's going on".

Lastly, typographical errors, accounting for 28.57% of the total errors, underscored the importance of proofreading and editing skills in written communication. This type of errors was added by the researcher to the text error analysis approach of the pre-test specifically because it had been conducted on a digital environment where the students have used

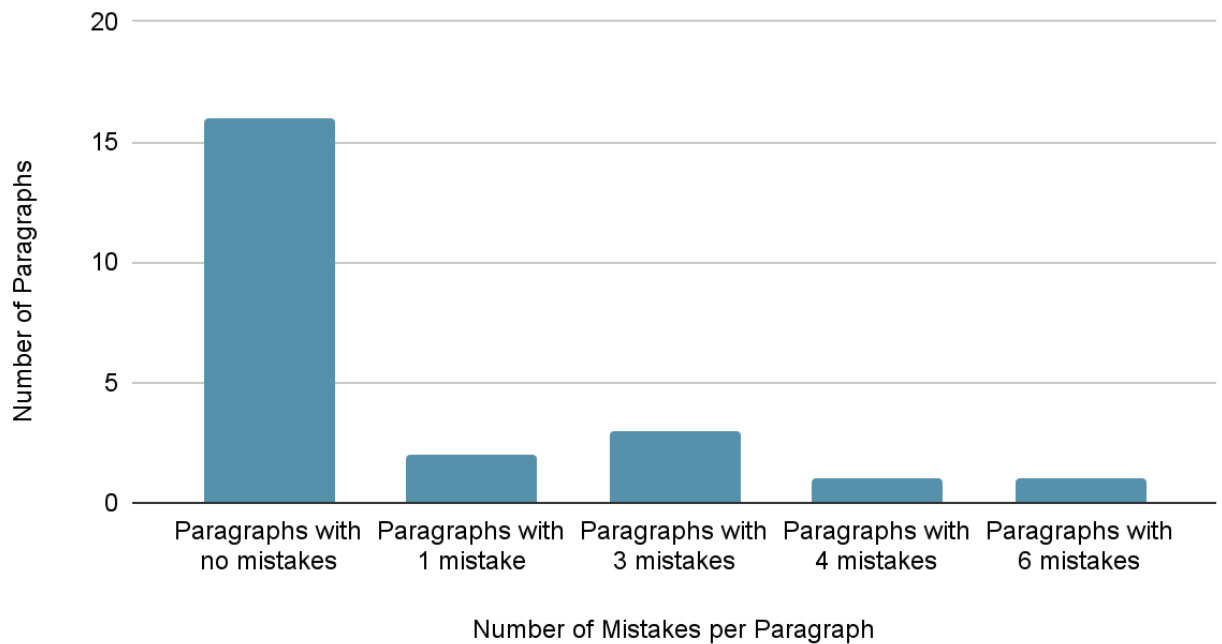
unnatural mistakes such as "ar" instead of "are", "sjnce" instead since", "my father yields on me" rather than "my father yelled at me", "his son was angry with bim" instead of "was angry at him" and also "take care if them all" instead of "take care of them". Finally, the researcher noticed the rushing out to click on the first looking alike words of the Mobile Auto-Correction Tools' suggestions because some have used words which are unnatural for their context, for example "they were mistreated by the while folks" instead of "the white folks", and finally "investigating alot of efforts" instead of investing a lot of efforts".

Overall, the comprehensive analysis of the pre-test data provides valuable insights into the specific types of spelling mistakes prevalent among the participants, guiding instructional strategies and interventions aimed at enhancing spelling proficiency and linguistic accuracy.

The pre-test included 23 responses, revealing varying frequencies of spelling errors among the submitted paragraphs. The error distribution was as follows: 16 paragraphs were error-free, 2 paragraphs contained one error, 3 paragraphs had three errors, 1 paragraph had four errors, and 1 paragraph contained six errors. Notably, approximately 70% of the participants submitted paragraphs without any spelling mistakes, around 9% made one mistake, about 13% had three spelling errors each, and roughly 4% each submitted paragraphs with four and six spelling mistakes, respectively.

Figure 2 below represents this distribution. These results indicate that while most students demonstrated strong spelling skills in the pre-test, a minority encountered difficulties, with errors ranging from occasional to more frequent. This data highlights the need for targeted interventions to support students struggling with spelling accuracy.

## Error Rate Distribution in the Pre Test



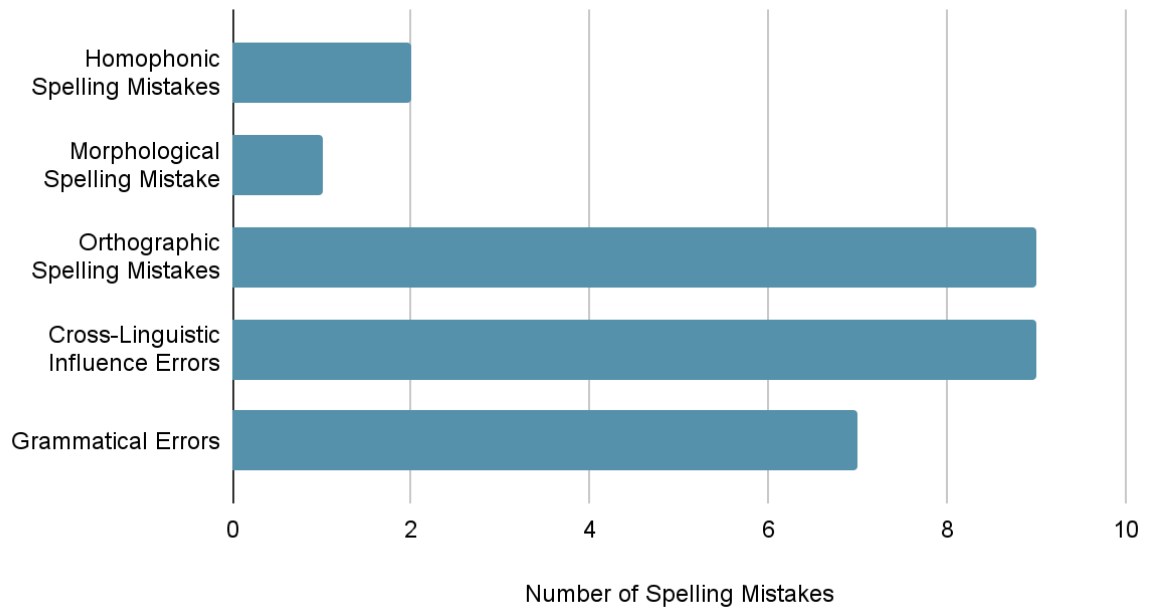
**Figure 2:** Error Rate Distribution in the Pre-test

Out of the 23 paragraphs submitted, 16 were meticulous, academic, and free of errors, while the remaining 7 paragraphs contained a total of 21 mistakes. The mean was calculated from the addition of all the 21 participants' mistakes and divided upon the number of participants (23), resulting in "0.9130434783" as the mean of the pre-test. with which the standard deviation was calculated starting from the data set of the pre-test and the mean, which resulted in "1.2362168512".

### 1.2 Discussion of the Post-Test

The Graph below shows the results of the post-test including the total number of errors. It gives more details about the errors made, the frequency number and the percentages of the spelling errors made.

## Spelling Mistake Categories



**Figure 3:** Findings of the post-test

The post-test analysis yielded valuable insights into the spelling proficiency and linguistic accuracy of the participants.

The post-test analysis offers valuable insights into the participants' spelling proficiency and linguistic accuracy following the intervention. The data reveals a shift in the types and frequencies of errors compared to the pre-test, indicating the impact of the intervention on participants' language skills. In the post-test, the participants have produced their paragraphs on a paper, there was no use of digital devices or software.

Homophonic spelling mistakes, which involve words that sound alike but have different meanings or spellings, increased slightly in the post-test, accounting for 7.14% of the total errors. This uptick suggests a nuanced challenge in distinguishing between homophones, for instance, the students have written "we fill in peace and wonder" instead of using "feel", and used "wright" instead of "write".

Morphological spelling mistakes remained relatively low, with only 3.57% of the total errors. This indicates a continued proficiency in understanding word parts and formations, although occasional errors still occur. the error that has occurred in the post-test was the word



"loneless" instead of "loneliness" which denotes of the lack of knowledge regarding aggregating stems and affixes.

Orthographic spelling mistakes saw a notable increase, representing 32.14% of the total errors in the post-test. These errors pertain to visual patterns and memory-based spelling, suggesting potential challenges in recalling correct spellings. The main frequent anomalies are the following; Nowdays and nowedays with "E" instead of "Nowadays", "Finaly" with one "L", "Countey" instead of "County", "Friend-ship" with a hyphen, "ides" instead of a "ideas", "som" instead of "some", "overwelmed" instead of "overwhelmed" and "aesthic" instead of "aesthetic"

Cross-linguistic influence errors also comprised 32.14% of the total errors in the post-test. This finding reflects the ongoing influence of participants' language backgrounds on their English spelling. "humain" which is the French spelling of "human", "primaire school" from french instead of "primary school", rebooste with a final "E", "devellopment" with a double "L", "plateform" with an "E" from french instead of "platform", "acadimc" and "acadimic" instead of "academic", and finally "sur" instead of "sure". All the cited errors are an interference of the French language which is Algeria's first foreign language, and which the students have studied since primary school, these cross linguistic errors are a common phenomenon within the Algerian population.

Grammatical errors, while reduced compared to the pre-test, still accounted for 25.00% of the total errors in the post-test. This category encompasses syntactical, grammatical, and punctuation inaccuracies, highlighting areas where participants may require continued instruction and practice. The researcher has noted the frequency and the confusion of misplacements between "that" and "that's", as well as "it" - "it's" - "its", denoting of the confusion of students about the difference between personal pronouns and possessive pronouns. Furthermore, "Benefical" instead of "Beneficial" which could have been categorized in the cross-linguistic influence error for its similarity to the French word.

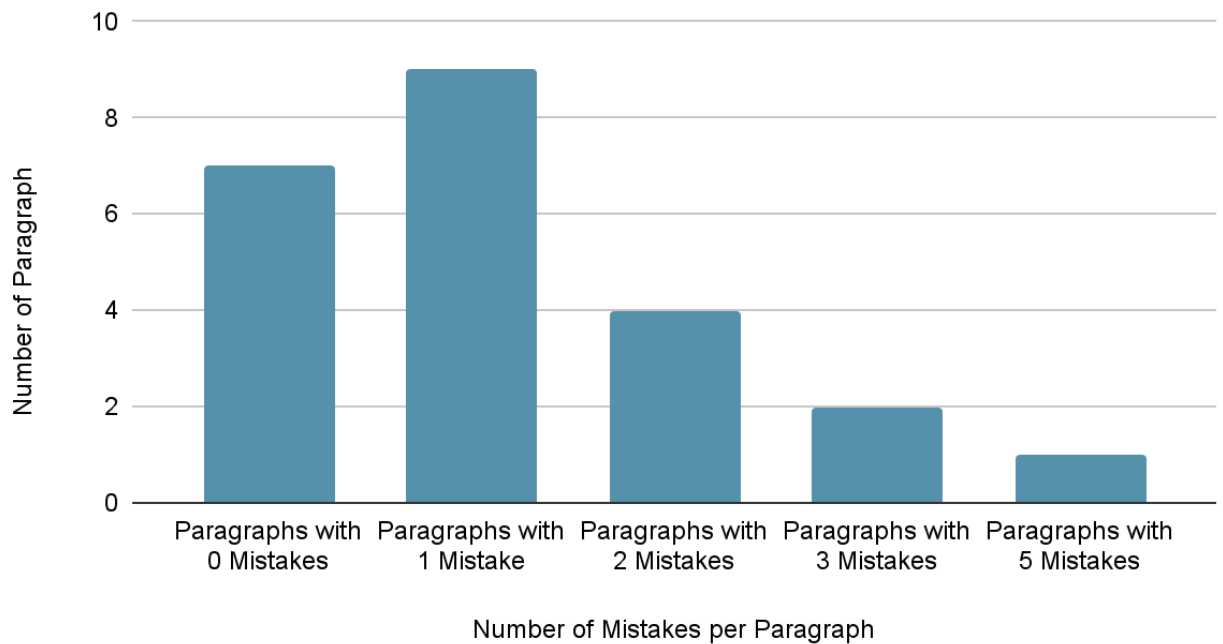
"Medias" with the plural "s" which is an error as "Media" is already plural, and finally "defferent" instead of "Different".

Overall, the post-test analysis reveals a mixed outcome in spelling and linguistic accuracy. While there are improvements in some areas, persistent challenges remain in others. The increased occurrences of orthographic spelling mistakes and cross-linguistic influence errors highlight the complexities of language learning. These findings emphasize the need for ongoing targeted interventions and support to further enhance spelling proficiency and linguistic accuracy among participants.

The post-test, which followed a similar format to the pre-test, revealed a different distribution of spelling errors among the participants' submissions. Out of the total responses, 7 paragraphs had no mistakes, 9 paragraphs had one mistake each, 4 paragraphs contained two mistakes each, 2 paragraphs had three mistakes each, and 1 paragraph had five mistakes. Specifically, around 30% of the participants submitted paragraphs without any spelling errors. Approximately 39% made one mistake in their submissions, while about 17% of the paragraphs contained two mistakes each. Around 9% of the paragraphs had three mistakes, and one paragraph, representing about 4%, had five spelling mistakes.

The post-test had a total of 23 paragraphs submitted, where 7 of these written productions were flawless. However, the remaining productions had a total of 28 mistakes, which surpasses the total spelling error frequency of the pre-test in which the students had access to their mobile auto-correction tools (MACT).

## Error Rate Distribution in the Post Test



**Figure 4:** Error Distribution in the Post-test

This figure depicts this distribution. The post-test results indicate a noticeable increase in the number of mistakes compared to the pre-test, suggesting a potential dependency on mobile auto-correction tools (MACT) during digital writing tasks. The data highlights the importance of continued focus on improving independent spelling skills and reducing reliance on technological aids for accurate spelling.

The mean was calculated from the addition of all the 28 mistakes and divided upon the number of participants (23), resulting in "1.217" as the mean of the post-test. with which the standard deviation was calculated starting from the data set of the post-test and the mean, which resulted in "0.7569332002".

## 2. Discussion of the Pre and Post-tests

In addressing the research question regarding the impact of Mobile Auto-Correction Tools (MACT) on the written spelling skills of first-year master's students transitioning from digital to traditional paper writing, our findings provide valuable insights.

Our hypothesis posited that the daily use of MACT in digital writing contexts negatively affects students' spelling skills when they shift to traditional paper writing. The pre-test and post-test assessments aimed to explore this hypothesis by analyzing participants' spelling proficiency and linguistic accuracy in both contexts.

In the pre-test, participants demonstrated a commendable grasp of homophonic spelling, with no errors recorded in this category. This indicates a strong ability to discern between words that sound alike but have different meanings or spellings. However, the post-test showed a slight increase in homophonic spelling mistakes, indicating a nuanced challenge in distinguishing between homophones.

Morphological spelling mistakes, although relatively low in both tests, remained consistent between the pre-test and post-test. This suggests that participants maintained their proficiency in understanding word parts and formations, with occasional errors still present in both assessments.

Orthographic spelling mistakes saw a notable increase in the post-test, accounting for a larger percentage of total errors compared to the pre-test. This highlights potential challenges in recalling correct spellings based on visual patterns and memory. The post-test revealed more instances of orthographic errors, indicating a shift in participants' spelling accuracy after the intervention.

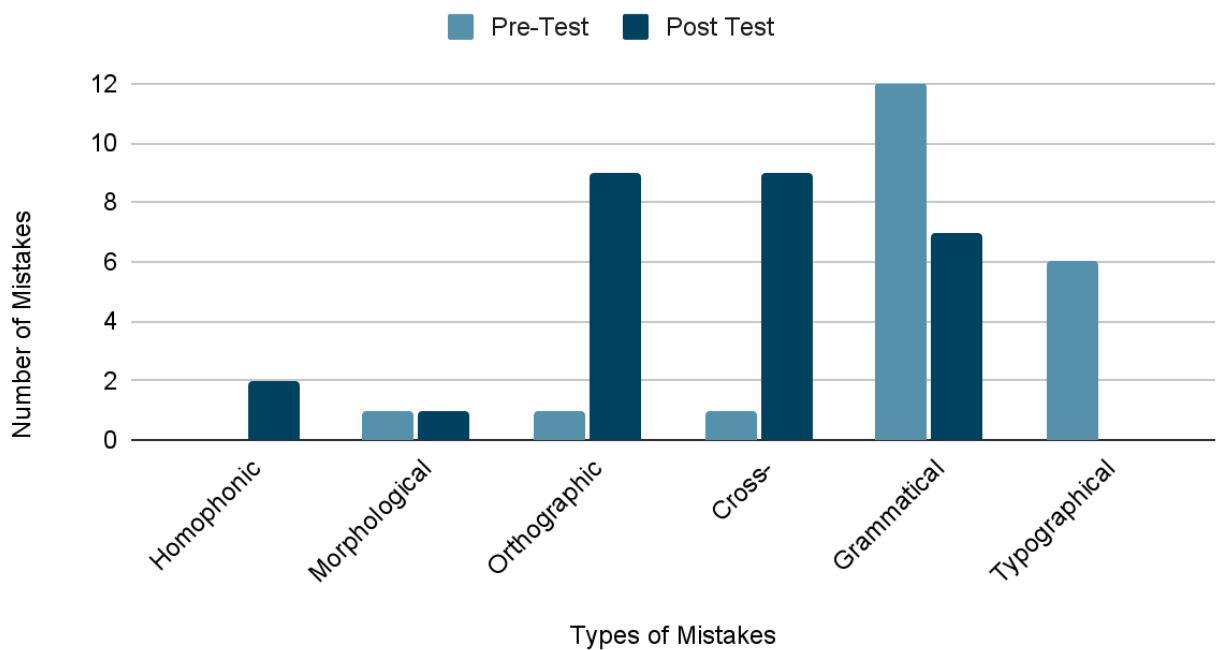
Cross-linguistic influence errors remained consistent between the pre-test and post-test, reflecting the ongoing impact of participants' language backgrounds on their English spelling. The prevalence of these errors underscores the complexity of language transfer and the need for continued support in addressing linguistic interferences.

Grammatical errors, while reduced in the post-test compared to the pre-test, still constituted a significant portion of total errors in both assessments. This category encompassed syntactical, grammatical, and punctuation inaccuracies, highlighting areas where participants may require continued instruction and practice.

The pre-test had a total of 23 paragraphs submitted, where 16 of these written productions were meticulous, academic, well-crafted, and had zero mistakes, whether about spelling, grammar, language interference, or vocabulary. However, the remaining productions had a total of 21 mistakes. The mean of the pre-test was calculated as 0.91, with a standard deviation of 1.24, indicating variability in the frequency of errors among participants.

In the post-test, there were also 23 paragraphs submitted, with 7 of these written productions being flawless. However, the remaining productions had a total of 28 mistakes, surpassing the total spelling error frequency of the pre-test in which the students had access to their mobile auto-correction tools (MACT). The mean of the post-test was calculated as 1.22, with a standard deviation of 0.76, suggesting less variability in errors compared to the pre-test.

### Comparison of the Tests' Findings



**Figure 5:** Comparison between the occurrence and the types of mistakes between the pre-test and the post test

Figure 5 presents a comparison of spelling errors between the pre-test and post-test, showcasing the shifts in spelling proficiency and linguistic accuracy among participants across the digital-to-paper writing transition.

The comparison between the pre-test and post-test findings indicates a mixed outcome in spelling and linguistic accuracy. While certain areas showed improvement, such as the reduction of homophonic spelling mistakes and grammatical errors, other areas, such as orthographic spelling mistakes and cross-linguistic influence errors, presented ongoing challenges. These findings emphasize the need for targeted interventions and ongoing support to enhance spelling proficiency and linguistic accuracy among participants.

Additionally, the standard deviation calculations reveal insights into the consistency of errors: the higher standard deviation in the pre-test (1.24) compared to the post-test (0.76) suggests greater variability in spelling proficiency when MACT is available. This further underscores the impact of MACT on participants' spelling accuracy and highlights the necessity for continued support in writing contexts.

### **3. Summary of the Discussion and Interpretation of the Findings**

The analysis of the pre-test and post-test data provides valuable insights into the spelling proficiency of the participants, highlighting areas requiring further attention. This analysis directly addresses our research question: "How does the use of Mobile Auto-Correction impact the written spelling skills of first-year master's students of English at the University of Bejaia when they transition from digital to traditional paper writing?"

Our hypothesis posited that the daily use of MACT in digital writing contexts would negatively affect students' spelling skills when they shifted to traditional paper writing. The pre-test and post-test assessments aimed to explore this hypothesis by analyzing participants' spelling proficiency and linguistic accuracy in both contexts.

In the pre-test, participants demonstrated a strong grasp of homophonic spelling, morphological spelling, and cross-linguistic influence errors. These areas showed minimal

errors, indicating a commendable understanding of word nuances and language transfer challenges. However, the pre-test also revealed significant challenges in orthographic spelling and accuracy, with a notable percentage of errors in these categories.

Following the intervention and analysis of the post-test data, several noteworthy trends emerged. The increase in orthographic spelling mistakes and cross-linguistic influence errors post-intervention indicates persistent challenges in visual recall and language transfer. These findings align with our hypothesis, suggesting that the reliance on MACT may hinder the retention of accurate spelling skills when such tools are not available.

The overall standard deviation, calculated from the mean of errors in both tests, provides insight into the variability of spelling mistakes among participants. In the pre-test, the standard deviation was 1.24, indicating a higher variability in error rates. In contrast, the post-test had a lower standard deviation of 0.76, suggesting more consistent performance among participants, albeit with a higher average number of mistakes.

Interpreting these findings, it is evident that targeted interventions and instructional support have positively influenced certain aspects of spelling proficiency and linguistic accuracy among participants. The reduction in homophonic spelling mistakes and grammatical errors indicates successful learning outcomes from the intervention. However, the persistent challenges in orthographic spelling and cross-linguistic influence errors underscore the ongoing complexity of language learning and the need for continued support and practice in these areas.

In conclusion, while the intervention has shown improvements in specific areas, there remains a need for sustained efforts in addressing orthographic challenges and mitigating cross-linguistic influences. The findings from both the pre-test and post-test provide valuable insights into the impact of mobile auto-correction tools on students' spelling skills. These tools allowed students to produce more accurately spelled paragraphs in the pre-test than in the post-test, as the latter restricted the use of any external resources. This underscores the

need for balanced use of digital aids in language learning and the importance of traditional spelling practice to ensure comprehensive spelling proficiency.

#### **4. Limitations of the Study**

Through our research work, several significant obstacles were encountered. One of the primary challenges was at the level of student participation. The researcher found it difficult to convince students to participate and to complete the required tasks seriously, particularly in the pre-test.

Furthermore, the current study acknowledges the limited scope of research focusing on students' spelling problems, particularly concerning the impact of auto-correction tools. The researcher would have greatly benefited from adopting an experimental design with both an experimental group and a control group. Extending the study duration over a longer period and including multiple long written productions for both pre-test and post-test assessments would provide more comprehensive insights.

Additionally, the study faced time constraints. Due to these limitations, the researcher did not allocate much time between the pre-test and post-test and was unable to include students from other specialties. These factors may have impacted the findings and the generalizability of the study.

#### **5. Implications**

For the program, program designers can consider integrating spelling activities which can contribute to the development of students' spelling performance (Graham & Santiago, 2014). Because, many students appear to perceive spelling as an unimportant aspect of the language since no emphasis was given to this skill in the schools' books (Krashen, 1989).

Educators can design activities focusing on orthographic spelling rules, morphological structures, and cross-linguistic influences to enhance students' spelling proficiency as the study highlights the importance of developing targeted instructional strategies to address specific spelling challenges observed in the pre-test and post-test.



Educators may find it beneficial to explore strategies aimed at addressing cross-language influences on students, thereby assisting them in navigating language transfer challenges more effectively (Man Chu Lau et al, 2020).

### **6. Recommendations and Suggestions for Further Research**

Little researches have dealt with the spelling problems of the students, future research will be beneficial if it focuses on the impact of the auto-correction tools on students' spelling skills using an experimental group and a control group over a long period of time and through at least three long written productions for each of the pre-test as well as post-test, further research could also investigate the effect of corrective feedback in spelling performance.

Further research also can focus on the effect of teaching spelling strategies in order to overcome the students' spelling problems. To get a clear idea about the learner's spelling difficulties, it may be useful if the researcher gives the participants a dictation (Zakiyah & Husniah, 2018). This is because in a piece of free writing the learner may avoid words that are difficult, and also because a dictation includes words with arrangement of letter patterns and sounds and, thus, show more clearly the difficulties learners face when spelling a word.

Further research can focus more on practice and exercises that can be conducted among students in English spelling in order to eliminate the students' errors in this area.

Further study can deal with how feedback is perceived by learners with individual differences when correcting their errors, and what stops the students from retaining the words which their auto-correction tools have accurately spelled for them several times and yet still make errors when writing without it.

Also, additional research may be needed in regards to other aspects of writing such as content, organization or vocabulary. This study would help to clarify whether the effectiveness of teachers' feedback can be applied in different aspects of writing skill.

## **Conclusion**

The current study sought to examine the effect of mobile auto-correction tools on master students' spelling performance when writing. It involved a pre-test and post-test measuring students' spelling proficiency and accuracy.

The findings showed that the students have moderately outperformed in the pre-test than in the post-test. The pre-test where the use of mobile auto-correction came in handy and easy to use more, but students ended by making more spelling mistakes in their post-test which took place in a class environment where using smartphones or any digital software was prohibited.

Then relying on the research results, we have suggested a set of pedagogical recommendations for further research.

## General Conclusion

While spelling is a crucial aspect of writing skills, many students, particularly those in their final university years, still encounter challenges when it comes to writing even the simplest and most common words. Despite having access to digital devices equipped with auto-correction tools that provide accurate spellings daily, students often struggle to internalize these corrections and apply them effectively in non-digital environments, such as exams where they rely solely on their memory and knowledge.

This research was carried out with 23 first-year master's students in English linguistics at Bejaia University. The study aimed to assess the reliance of these students on auto-correction tools and their ability to spell accurately without such aids. Our study started from the hypothesis that the sample population is unable to retain the correct word spelling which they are provided frequently in their digital devices and that the students have become so dependent upon these tools in order to write until the point where they cannot accurately spell the simplest words of common English even at their final years of education. Many of these students are likely to pursue careers as English teachers across various educational levels, including primary schools, middle schools, high schools, and universities. This context underscores the gravity and importance of our research.

This research involved a pre-test and post-test measuring students' spelling proficiency and accuracy, in which students had to write paragraphs on a digital environment as a pre-test with all the auto-correction tools available and easy to use. As a post-test, students had the same task but had to write on paper without the aid of any digital software.

The analysis of the data obtained from the pre-test and post-test showed that students have made less mistakes when in the pre-test, some of them have submitted flawless production, while the post-test had an increase in mistakes and errors of many types, including homophonic, morphologic and cross-linguistic influence errors of spelling.

The following conclusions have been made in the light of the discussions related to the findings and hypothesis. The written productions of the pre-test have mostly been flawless in all writing aspects, including spelling. In contrast to the post-test which had an increase of errors. That is because, unlike the pre-test, the students had not been permitted to use external resources while writing.

The standard deviations of spelling errors between the pre-test and post-test showed no significant difference. This lack of differentiation in standard deviations raises questions about the generalizability of our findings. The absence of a distinct difference suggests that the observed variations in spelling proficiency may not be solely attributed to the use or absence of MACT. Consequently, our hypothesis predicting a significant impact of MACT on spelling skills was not confirmed. These results underscore the need for caution in generalizing the findings and highlight the complexity of factors influencing spelling proficiency beyond the use of digital tools. Future research endeavours should consider larger sample sizes and extended study durations to capture more significant differences in spelling accuracy over time and further explore the nuanced relationships between digital writing aids and spelling proficiency.

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## APPENDICES

**Appendix A:** Pre-Test Sample Responses

**Appendix B:** Post-Test Sample Responses

## **Appendix A: Pre-Test Responses**

### **Participant 1:**

Cars, the epitome of modern mobility, have revolutionized the way we navigate the world around us. From the early days of Henry Ford's Model T to the sleek, high-tech vehicles of today, cars have evolved into more than just modes of transportation; they're symbols of status, freedom, and innovation. Whether it's the thrill of accelerating on an open highway or the convenience of running errands in the city, cars offer unparalleled convenience and utility. However, with innovation comes responsibility, as the environmental impact of mass car usage becomes increasingly apparent. As we look to the future, the automotive industry is tasked with finding sustainable solutions to ensure that the convenience and freedom cars provide can coexist harmoniously with our planet's wellbeing.

### **Participant 2:**

Globalization is a complex and multifaceted phenomenon that encompasses various aspects of economic, political, social, cultural, technological, and strategic dimensions. It is a process of dissolution of national spaces, driven by the proponents of globalization, and characterized by the breaking down of tariff barriers, allowing the free flow of raw materials and goods between countries. This process has led to increased interdependence among nations, with problems such as hunger, disease, poverty, unemployment, illiteracy, racism, and communalism no longer being limited to single countries, but becoming global issues that require collective solutions.

### **Participant 3:**

Students must help each other especially in studies. One must benefit other mates and benefit from them, which means that it ought to be reciprocal between them. Additionally, a student

should provide help for others in case there is need of that. Furthermore, one can exchange ideas with others to obtain the corrective feedback which is important for progressive studies.

**Participant 4:**

Sociolinguistics is the study of the relationship between language and society, focusing on how various social factors influence the way language is used and how language, in turn, affects society. It is an interdisciplinary field that combines sociology and linguistics, with the primary objective of understanding the consequences of language on societies and the impact of social factors on language.

**Participant 5:**

The globalisation process has had significant implications for financial markets, leading to the globalisation of capital markets and the liberalisation of financial flows. This has resulted in increased diversification of risks, reduced risk non-diversifiable in investment portfolios, and higher demand for risky assets, leading to an increase in asset prices. However, the process of globalisation is not without its challenges, and the removal of barriers to international investment does not necessarily lead to a unified pricing system for financial assets.

**Participant 6:**

Language is a powerful symbol of behavior that influences social factors, often leading people to judge others based on their language. It is not just about sharing or having opinions but also about how we interact and behave in our daily lives. Sociolinguistics helps us understand these language variations and how they are influenced by various social factors, such as ethnicity, social class, age, gender, education, and economic status.

**Participant 7:**

The study of sociolinguistics is crucial for language learners, as it helps them understand the nuances of language use in different social contexts. For instance, a gesture that is considered acceptable in one culture, such as pointing, may be seen as impolite in another.

Sociolinguistics helps learners navigate these cultural differences and communicate effectively in various social contexts.

**Participant 8:**

The term globalisation has its origins in the literature on multinational corporations, initially referring to a limited phenomenon of a globalised demand, but later expanding to encompass a new stage of the global economy. It is often used interchangeably with the term mondialisation, but a distinction can be made between the two. Globalisation, in its current usage, refers to the process and result of a generalization, such as the generalization of market regulation or the generalization of certain procedures, techniques, and rules from a strictly operational perspective. On the other hand, mondialisation still carries the idea of a unified and ordered world, reflecting the concrete, social, and natural world that we inhabit.

**Participant 9:**

Sociolinguistics also plays an essential role in language teaching, as it helps learners understand the impact of society on language and vice versa. By incorporating sociolinguistics into language teaching, educators can promote positive attitudes towards learning a foreign language, introduce cultural elements into the curriculum, and help learners determine the correct expression for appropriate social contexts.

**Participant 10:**

Power is the energy that exists inside everyone of us and it ought to be developed in order to get good or satisfying results. There is nobody who is not being powerful in this life, but the problem is how his/ her abilities are used and developed. However, it depends from one person to another; we can find punctual people as we can find lazy ones. Besides, this internal power can be developed by hard working, investigating a lot of efforts, taking risks and enjoying the things we do. Thus, after that, great satisfaction and good results will be our reward.

**Participant 11:**

My name is Hamza Khetache, a 22-year-old student currently pursuing my Master's degree in Linguistics at the University of Abderahman Mira in Bejaia. I am passionate about exploring the intricate nuances of language, particularly in the realm of English. My academic journey has been a fulfilling one, as I delve deeper into the complexities of language structure, semantics, and sociolinguistics. Beyond the classroom, I enjoy immersing myself in literature, analyzing the works of renowned authors, and uncovering the cultural significance embedded within language. With each passing day, I strive to expand my understanding of linguistics and its profound impact on society, eager to contribute meaningfully to the field and beyond.

**Participant 12:**

In the real world, sociolinguistics is essential for understanding how language is dealt with in various social contexts. It helps educators understand the historical and social factors that influence language use and enables them to instruct students effectively. By combining the study of sociolinguistics with literary theory, students can better understand the overall text and gain a more well-rounded view of the text.

**Participant 13:**

Everyone has a dream or an objective in mind to achieve it . But the way that we use to achieve it differs from one to another .Your objectives shouldn't be based on what your parents



desire or what your society imposes you . That's why we should follow our passion ,desire moreover keep your hard working and have a willpower to realize something you want ;whenever you fail keep trying and keep your hope.

**Participant 14:**

Family is a paramount and sacred part in my life . Everyone has its own definition of family .Personally it is security ,unity ,love and everything I can not imagine my life without my siblings or parents. But your family accept you as you are , they knew about your good and bad side , many people didn't have the chance to have someone to protect or support them .A family doesn't need to be perfect because none chooses his parents but it needs to be united

**Participant 15:**

Time is money

'Time is money' is a timeless principle that emphasizes the importance of each and every moment. Time is the most valuable resource we possess, and our choice of how to use it defines our wealth. Every second that passes is an opportunity to invest in our goals, dreams, our relationships, and our own development. Thus, we must carefully manage our time wisely, giving priority to tasks and activities that will assist us reach our objectives, just as we do with our finances. After all, in the end, the true measure of our prosperity is not the money in our pockets, but rather the time we have spent building and creating a life that is meaningful and satisfying.

**Participant 16:**

Feminism

Feminism is considered as a social and political movement supporting for gender equality, and eliminating gender inequality that oppress women. It aims to address issues like

gender-based discrimination, violence against women, unequal pay, and limited reproductive rights. Moreover, feminism endeavors to create a society in which every person, no matter what gender, has a right to the same opportunities, freedoms, and equals. In seeking to create a society where women are free to make decisions about their lives without fear of criticism or restraint, it inquires traditional gender norms and stereotypes. As Emma Watson emphasizes "Women's rights are human rights. Feminism is about creating a world where everyone has equal opportunities and freedoms, challenging discrimination and stereotypes along the way." Ultimately, feminism promotes diversity and justice, which benefits not only women but also society as a whole.

**Participant 17:**

Sociolinguistics is a vital field that helps us understand the relationship between language and society. By studying the impact of social factors on language use and how language affects society, sociolinguistics provides valuable insights into communication and social interactions. Its applications in language teaching and learning, as well as in understanding literary texts, make it an essential discipline for educators and learners alike.

**Participant 18:**

Black American people were most likely the ones who suffered mainly from human's discrimination. They were treated as slaves because of their skin colors. Negro lived in appropriate situations where they were persecuted by the white folks. This community were treated like animals for more than 100 years which is a long historical fight against their discrimination and misery. The only dream they had was equality between the two races "white and black people" so that the future generation will have the opportunity to be free.

**Participant 19:**

Media is defined as the communication tool used by humans to provide information whether on TV, radio, or other web media like social media. Nowadays, we see that most of people like 90% have access to smartphones which allow them to communicate with the world outside with the applications provide in the play store section for instance. This technology and media in general impacted our daily life production. Before these advanced means, humans tend to use newspapers to communicate the news but now we can have access to the world news through scrolling in our social media applications, even that we still use newspapers and every existing media to transmit any given message. So we can say that these tools are important to be informed on what going on the world outside.

**Participant 20:**

Friendship is such a beautiful thing, it's like having a special bond with someone who truly understands you. It's about being there for each other through thick and thin, supporting one another, and creating memories that last a lifetime. Whether it's laughing together, sharing secrets, or just being there to lend a listening ear, friends make life so much more meaningful. They bring joy, comfort, and a sense of belonging.

**Participant 21:**

Facebook it's a social media platform that connects people from all over the world. You can share updates, photos, and videos with your friends and family. It's a great way to stay connected and catch up with what everyone is up to. You can join groups, follow pages, and even discover new interests. It's like a virtual community where you can interact, share, and engage with others. Plus, it's a fun way to reminisce about old memories and see how everyone has grown.

**Participant 22:**

Last week my sister wanted to buy a new pant ,but when we arrive to the store she was undecided between a jeans or tracksuit because she like the both,but she bought an other thing.when we arrive at home my father yields on me asking me why i accepted that she bought a bag sjnce he gave the money to the pants and not a bag .

**Participant 23:**

There is a boy who has his father always taken by his work because he was obligated to protect his village. His son was angry with bim seeing that his father never spend time with his family,but his sister and mother were comprehensive telling him that he must take care lf them all. One day the boy saw small summary of his father's past life for that day he started to accept his father and forgive him

## Appendix B: Post-Test Responses

## Participant 1:

# Children

Children are the best human being for me, they are those person who will love you as your mother does, they will never ask you for any return since they love you. They could love even if you never show them a big affection. When you feel sad or in a bad feeling, only a hug from a child will reboate your day. They are those person who will tell you all the truth, ~~and~~ And when you take care of them and give your time for being with them support them or even speak when it's their turn to feel bad you will have the better person of your life in front of you. The fact of helping them will push you to feel a better person because children they only need small of your time.

Remain (Age interreference FR)  
reboate " " reboate

(8)



## Participant 2:

Remain a human (language interference with FL) ③  
 dev with double LL " " " "  
 different " " different (Grammatical Errors)

• Learning Foreign language is considered as an essential process nowadays, since we live in a world full of development in different factors and people start discovering new things, new countries, new hobbies so the human being must know that he should be with time in every step to the bottom up we have to collect new things and new knowledge. Especially with the existence of technology it will be more easy to learn and travel just through our phones, So Learning foreign languages is important to be comfortable in every time of your life.

# Foreign languages



## Participant 3:

## # Social Media and its impact on EFL Learners writing:

As we know social media became the tendency of nowadays, so everyone use it in order to search, communicate and also to cultivate itself. EFL learners have been influenced by chatting through these platforms so that <sup>has an</sup> impact on their written expressions. They use more slang than academic language, more abbreviations, etc. So they should differentiate and make a distinction between slang and academic writing in order to improve their languages.

academic instead of academic.

Platforms instead of platform → <sup>5</sup> ~~was~~ <sup>ing</sup>

nowadays (Grammatical error)

Media (Grammatical) - its instead of it (Grammatical)



## Participant 4:

Greetings, we are supposed to ~~wright~~ something and I choose to speak about the ~~friend-ship~~ friendship. So, every one who has a friend he/she had to enjoy the moment with him/her, be respectful, honest and loyal. Every thing ends one day that's why it's better to live joyfully and let all the negative points apart which can destroy you.

friend-ship with a ~~Ryphen~~ Orthographic spelling  
that instead of that's → Grammatical Errors.

~~Wright~~ instead of Right.

→ Homophonic Mistake

# Writing



**Participant 5:**

Algerian cuisine has various food that habitants enjoy. We can find traditional & dishes as we can find modern ones. Besides, each dish has its own symbolic significance which refers to the ancient culture or the traditions of that country. Thus, tourists from around the world come with curiosity to discover the amazing taste of the Algerian culinary traditions!

②

(Orthographic) country instead of country

# Algerian Food

## Participant 6:

# References le 28-01-21.

Referencing is a citation of the practice acknowledging of resources of information and ideas in your writing. It's has several aims such as to avoid plagiarism, contextualization, and verification of the information. To set the set references is so important for your writing because it's known as a documentation.

## Participant 7:

Last week, I went with my mother to buy clothes. It was a rainy day, we so we used the car. We ~~st~~ entered to the store ~~to~~ where we bought some clothes then we took lunch at a restaurant. Finally we we returned home.

Orthographical mistakes.



## Participant 8:

Loneless was my only friend when I was a child and this was not a choice but due to many causes. <sup>First,</sup> I ~~could not~~ ~~at~~ my childhood was ~~full~~ of bad ~~be~~ always ill. Second, ~~this did~~ I could not enter to primare school because of my sickness this did not allow me to get many friends. Third, is that I was a fraid person who could not talk in public so every one avoid to accompagny me.

**Participant 9:**

- The difference between The literary Translation and Technical Translation can be summarized by giving a simplified presentation of The most important elements To consider while translating each Type. For The literary Text we should Maintain readability standards and Maintain aesthetic fund and for Technical Text we should Maintain The correctness of linguistic expressions in Terms of Semantics and structure.

**Participant 10:**

CU | informatique | Informatique & consommable

Notes In the future, I want to become a teacher of English, in order to teach and educate people to be the best version of themselves. Becoming a teacher is my dream since ~~since~~ I was a kid. I know that it is not an easy task to do, but I'm sure that I will accomplish my job in a good way.

(3)



## Participant 11:

8 Today, I came at university at  
9 9am in order to do my project  
10 and completed it so as to submitted  
11 This week. After that at 9h40 we  
12 had a Translation session where  
we worked on Translations unit and  
how to use them in text. Then at  
11h30 we have Sociolinguistic Session  
where I will present my project  
titled critical discourse analysis  
and Ideology, we are 4 members,  
each one has to present his part.  
So that all I have as sessions.

## Participant 12:

As we're approaching of the end of the year, as all the student I feel overwhelmed and stressed at the same time. firstly, I feel like the time passed so quickly and we didn't felt How it went. during this time I met new people and new teachers, I gained New Knowledge in various topics and enjoyed 😊. However, as ~~the~~ it's almost the period of exams and many teachers give us plenty of works to do I feel stressed and tired.

In the end, I think all of what I said is just a part of the school life and that when I'll ~~be~~ not be here anymore I will just have the memories.



**Participant 13:**

Nature is like a beautiful song that makes us feel alive. It's the trees, the animals, the rivers, and the mountains all living side by side. When we spend time in nature, we see how everything works together. and it makes up appreciate the world even more. with nature we feel in peace and wonder. reminding us of the amazing world

## Participant 14:

## # Benefit of Technology.

Technology nowadays has a positive effect on our everyday life, it provides us with a various educational content and platforms such as, youtube, Zoom, a Google websites, which ~~can~~ are very beneficial to both adults and children. Technology has changed the whole world and becomes a small city, well, we can travel around the world just from your phone, discover the foreign cultures, learn new languages since we are in the field of [ language, linguistic, foreign languages ].

Technology facilitate the world and offer various services.



**Participant 15:**

Working out is essential for me, I can not stay more than one week without going to the gym, and it's not only a physical need but a mental one. I go to the gym to get out all the stress and the mental charge that I accumulated during the day and just take it off my shoulders. People prefer to not workout because it's too painful for them, but actually I enjoy the pain because it's a feeling of determination and pushing my limits.

**Participant 16:**

Do you think that Friendship  
exists?

We all have friends, wherever in  
the classroom, or from childhood,  
university, ... etc. But I think that  
the real friend that we all need to  
have does not exist, the one who  
could stay with you in your sadness  
and your happiness, who could  
listen to you all the time.



**Participant 17:**

pollution is a dangerous phenomenon that happens on the world and threaten all the creatures, because of human activities. There are three types of pollution: first, air pollution that is caused by the car the smoke of cars and trucks, also factories and industrial activities. second, water pollution and it is a result of killing the sea fish by polluting the seas and the oceans through spilling the oil by the ships. and finally, the earth pollution that is caused by cutting the forests and killing animals also the trash.

**Participant 18:**

Friendship is a beautiful bond that bring joy, support, and laughter into our lives. It's like a treasure chest filled with shared memories, inside jokes, and heartfelt conversations. True friends are always there for each other, through the ups and downs, offering a listening ear. They celebrate successes. Friendship is a priceless gift that enriches our lives and reminds us that we're never alone.

**Participant 19:**

- being in a relation with someone, either with a girl (as a bestfriend), or a boy (a boy-friend) is quite hard for me, because when you are an introvert it is difficult to talk with people, especially taking the first move. So, I tried to search for this issue, and I found out, it called social anxiety.



## Participant 20:

Health, a life . . .

Nowadays, most of people think and convinced that happiness is reached just from being rich, simply because they are ~~so~~ without any diseases or health problems, but they are far from the truth. What is the truth?

It is that happiness is equal to health, the person who is very rich and sick can not feel happy, and sometimes he/she can not even buy the health in exchange of his/her fortune.

So we have to preserve our health and enjoy life since we are fine and in a good health.



**Participant 21:**

Time is Worthy .

In my free times , I like to enjoy my time and be productive . Sometimes I select a book to read , other times improve my English language and other times I cook my favourite meal . It depends on the mood , but I prefer to take profit of that time and not waste it .

**Participant 22:**

~~on day I read a book~~

The last year I started to read books , and I really regretted that I didn't do it since I was young , because it is an other world , that teach you a lot of things about life , people , and even yourself not only this , but also you will improve your language and critical thinking . I really learned many things , and I changed my way of thinking radically .

## Participant 23:

Hi, Prudence, a girl who struggled many things in her life since the death of her father. I was the youngest girl in my family so my father and mother treated me like a princess, even ~~my~~ when I have problems or want to tell something, the first person I think to it is my father. One day all the happiness in my face faded because the wall that I always stand to has been destroyed, it was like a nightmare that morning, I still remember his face when ~~his~~ his soul went out. So today, I want to tell you something father, I am not longer the youngest girl you left, today I became women and I want ~~to~~ you to be proud of me, and I am very proud ~~to~~ having you father a hero, Rest in Peace father.



## Résumé

Les outils mobiles d'autocorrection ont transformé la communication écrite, mais des inquiétudes persistent quant à leur impact sur la précision orthographique et la maîtrise de l'écriture, en particulier chez les étudiants. Cette étude examine l'influence des outils mobiles d'autocorrection sur les performances orthographiques et les compétences rédactionnelles de 23 étudiants de première année de Master de linguistique anglaise à l'Université de Bejaia. À l'aide d'une conception de pré-test et de post-test, les participants ont été évalués sur leurs compétences orthographiques, le pré-test permettant l'accès aux outils de correction automatique mobiles et le post-test limitant les ressources externes. L'analyse a révélé une augmentation des fautes d'orthographe lors du post-test, en particulier des erreurs d'orthographe et d'influence linguistique croisée. Bien que les outils de correction automatique mobiles facilitent la correction orthographique immédiate, ils favorisent également la dépendance et les erreurs d'orthographe à long terme lorsqu'ils ne sont pas disponibles. Notamment, les écarts types du pré-test et du post-test n'ont montré aucune différence significative, ce qui indique une cohérence dans les fautes d'orthographe dans les deux tests. Ce manque de différenciation des écarts types soulève des questions sur la généralisation des résultats et suggère que notre hypothèse, prédisant un impact significatif des outils d'autocorrection mobiles sur les compétences orthographiques, n'a pas été confirmée. Cela met en évidence la nécessité de stratégies visant à atténuer la dépendance et à promouvoir des compétences orthographiques indépendantes parmi les apprenants en langues qui s'appuient sur les outils de correction automatique mobiles. Les considérations pour les recherches futures incluent des échantillons de plus grande taille et des durées d'étude prolongées pour capturer des différences plus significatives dans la précision orthographique au fil du temps.

**Mots-clés** : correction automatique, fautes d'orthographe, performances orthographiques, outils mobiles d'autocorrection, compétence rédactionnelle.



## ملخص

لقد أحدثت أدوات التصحيح التلقائي المحمولة تحولًا كبيرًا في الاتصالات المكتوبة، لكن المخاوف لا تزال قائمة بشأن تأثيرها على دقة التهجئة وكفاءة الكتابة، خاصة بين الطلاب. تبحث هذه الدراسة في تأثير أدوات التصحيح التلقائي المتنقلة على الأداء الإملائي ومهارات الكتابة لدى 23 طالبًا في السنة الأولى ماستر في اللغويات الإنجليزية بجامعة بجاية. باستخدام تصميم الاختبار القبلي والبعدي، تم تقييم المشاركين على أساس الكفاءة الإملائية، حيث يسمح الاختبار المسبق بالوصول إلى أدوات التصحيح التلقائي عبر الهاتف المحمول ويقيد الاختبار اللاحق الموارد الخارجية. وكشف التحليل عن زيادة في الأخطاء الإملائية في الاختبار البعدي، وخاصة في الأخطاء الإملائية وأخطاء التأثير عبر اللغوي. في حين أن أدوات التصحيح التلقائي للأجهزة المحمولة تساعد في التصحيح الإملائي الفوري، إلا أنها تعزز أيضًا التبعية والأخطاء الإملائية طويلة المدى عندما لا تكون متاحة. ومن الجدير بالذكر أن الانحرافات المعيارية للاختبارين القبلي والبعدي لم تظهر أي فرق كبير، مما يدل على الاتساق في الأخطاء الإملائية في كلا الاختبارين. يؤثر هذا النقص في التمايز في الانحرافات المعيارية تساؤلات حول إمكانية تعميم النتائج ويشير إلى أن فرضيتنا، التي تنبأ بتأثير كبير لأدوات التصحيح التلقائي المحمولة على مهارات الإملاء، لم يتم تأكيدها. وهذا يسلط الضوء على الحاجة إلى استراتيجيات لتخفيف التبعية وتعزيز مهارات التهجئة المستقلة بين متعلمي اللغة الذين يعتمدون على أدوات التصحيح التلقائي عبر الهاتف المحمول. تتضمن الاعتبارات الخاصة بالأبحاث المستقبلية أحجامًا أكبر للعينات وفترات دراسة ممتدة لالتقاط اختلافات أكثر أهمية في دقة التهجئة بمرور الوقت.

**الكلمات المفتاحية:** التصحيح التلقائي، الأخطاء الإملائية، الأداء الإملائي، أدوات التصحيح التلقائي المتنقلة،

مهارة الكتابة.