



AN ANALYSIS OF THE USE OF ORTHOGRAPHIC RULES IN STUDENTS' WRITTEN ASSIGNMENTS IN DIGITAL ENVIRONMENTS

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Abstract:

Being literate in the 21st century implies more than knowing how to read, write, and calculate; in the digital era, literacy involves various aspects, including digital literacy. Information and communication technologies and the ever-growing amount and speed of written communication greatly affect how we use language in digital environments. This paper investigates orthographic rules and focuses on those segments specific to typing – namely, the use of a space, and writing the symbols that represent letters and punctuation marks. The main aim of this study is to identify and analyze common and recurrent mistakes undergraduate students majoring in English philology made in their essays written in English and translations written in Serbian. The results obtained from the analysis draw attention to those rules often violated in typing, and a possible language transfer in translation, focusing on contrastive analysis tenets. This study also draws attention to the significance of cultivating literacy in digital environments through the development of a neat and careful manner of using language in all contexts, particularly in formal and academic writing.

Keywords:

Orthographic Rules, Digital Literacy, Punctuation, Spacing, Language Transfer.

INTRODUCTION

Literacy has been defined and determined differently over time [1], [2]. Unlike the 20th-century interpretation of literacy as elementary, primary, or basic, incorporating reading, writing, and calculation, the 21st century introduces new aspects of the meaning of the term 'literacy'. Nowadays, literacy is defined more comprehensively, encompassing a wider and more complex scope, even changing the singular into plural word form; hence, we use the term literacies to identify different types, such as linguistic, mathematical, scientific, digital, media, environmental, financial, etc. [3]

The modern approach to literacy emphasizes the functional value of knowledge (called 'functional literacy') gained for solving various problems in everyday life [4]. With the development, expansion, and increasingly frequent use of modern information technologies in the modern world, digital literacy is not only becoming one of the indispensable

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segments of literacy but is also slowly gaining equal status with elementary literacy. Digital literacy can be defined as a combination of knowledge, skills, and attitudes required for the efficient use of digital technology in all areas of contemporary life – education, business, responsible and active social participation, and free everyday, leisure activities. Furthermore, digital literacy also includes effective problem-solving processes, communication, information management, collaboration, content creation, and sharing; it also implies knowledge construction [5]. The importance of developing students' digital literacy at the tertiary level has been emphasized; researchers investigated the issue from various perspectives: building a professional digital identity [6], preparing students for the 21st-century real-life demands [7], and developing students' transversal skills and competencies necessary for the 21st-century workplace [8].

In addition to the aspects mentioned earlier in this paper, digital environments encompass written communication, which requires correct and efficient language use in digital format. This paper aims to investigate the commonest mistakes students make in writing in a digital format, particularly focusing on the use of punctuation and spacing in typing. As regards punctuation, this paper primarily investigates those aspects differently realized in Serbian and English, relying on the main principles applied in contrastive linguistics. This study draws attention to the development of educated literate people who efficiently and correctly use language in pervasive digital environments incorporating formal and informal registers.

2. ORTHOGRAPHY IN THE DIGITAL AGE

Orthography is an indispensable part of literacy. Nonetheless, the pace and manner of modern communication in the digital age highly affects proper and correct writing. The application of orthographic rules in a digital environment raises several questions and dilemmas: do they belong to a special type of orthography, or do they represent a standard form used in the digital environment; what are the basic rules and what methodology should we employ in teaching; what subject/subjects should contain lessons focusing on orthography, and how it can be systematically presented and acquired.

The term 'digitalni pravopis' is defined in the Serbian language as a set of rules or guidelines defining the correct use of language in digital communication (e-mail, writing on the Internet, social networks, forums,

blogs, and various messaging applications in general). This area is strictly defined by rules stated in several books and guidelines defining orthographic conventions in the Serbian language. They rely on numerous rules prescribed for writing in general and additional rules that apply to printing. Although they have existed since the invention of the printing press, these rules nowadays gain more prominence because of the pervasive writing needs and habits in digital environments, particularly enhanced by the use of social media. On the other hand, there is no single equivalent phrase in English, which indicates the absence of strictly defined rules that are specific only to the digital environment. Generally speaking, orthographic rules used in digital environments encompass the application of all the orthographic rules used in handwriting, with an addition of several straightforward rules: the correct typing of spaces and punctuation marks (periods, commas, question marks, exclamation marks, colons, brackets, dashes, hyphens, etc.). In other words, when writing in digital environments, it is essential to respect typographic rules, integrating traditional grammar and orthographic conventions from Serbian or English, alongside specific typographic guidelines. [9].

The complexity of communication types in the digital age – varying from formal, professional, and academic registers to rather informal contexts – influences the way we apply orthographic rules in typing. Namely, the informal register (everyday colloquial language used in personal contexts) can contain a certain degree of flexibility and creativity, often featuring abbreviations and various emoticons. Although abbreviating words, phrases, and sentences follow certain rules, and one's arbitrary abbreviating is not allowed, nor recommended, sometimes these rules are influenced by the limitations of some platforms (on the H/Twitter network there are abbreviations, and hashtags are common due to the limited number of characters). The degree of application of orthographic rules in a digital environment also depends on one's attitude and perceptions of the platform they use. For example, common and standard orthographic rules are expected to be applied on LinkedIn because it represents a professional context and individuals having profiles there strive to present themselves well and respectfully, highlighting the main features of their professional biography and professional attitude (which can be enhanced by proper use of language). On the other hand, the main approach to the use of language in social media platforms, such as Instagram and Facebook, can greatly differ because it is perceived as informal, light-hearted, and belonging to leisure time, reserved for a



break from professional constraints. Formal communication, including a wide range of contexts – such as professional, and academic registers – demands the use of language that indicates the level of education, expertise, professional and personal attitude toward the intended audience and the topic addressed in the written communication. Unlike printed versions of books and academic papers, which usually go through a strict proofreading and editing stages, many written texts found online do not have any monitoring process which results in the approval for publishing. Therefore, we can find numerous examples of incorrect uses of language in written evidence online, which serves as a source of further incorrect instances of language. In such a way, mistakes are repetitively made, copied, enhanced, and after negligence and common use of such blunders become widely accepted and, therefore, perceived as norms. Hence, it is important to focus on this aspect of writing, by introducing a systematic way of teaching and using proper orthographic conventions in the digital, both formal and informal environments.

Orthographic rules used in digital environments are adopted at different stages throughout education and further professional development. Students first encounter these rules mainly at school, during their formal education; therefore, the school should be the first and foremost foundation for learning and applying these rules, thus forming the habits of correct typing. The greatest responsibility lies with education policies focusing on a systematic approach to teaching this aspect of writing and literacy, involving teachers, educators, and instructors as the mediators for their implementation. As regards the Serbian education system in primary and secondary schools, lessons devoted to proper typing and orthographic rules in a digital environment can be found only in the latest editions of the Serbian language and Information, Communication, and Technology textbooks for primary and secondary levels. The practice of writing assignments as a part of evaluation, particularly in Serbia and foreign language classes, is mainly conducted through handwriting, and students usually do not practice the use of orthographic rules when writing in digital environment; in other words, students do not have much opportunity to type formal assignments that are assessed during their formal education.

Additionally, courses (such as Modern Business Correspondence, Office Management, etc.) taught in some vocational schools of economics and law in Serbia have contained lessons devoted to proper typing for decades – still, with no specific mention of the term 'digitalni pravopis'. Furthermore, in certain professions, such

as journalism, marketing, PR, and the IT industry, the proper application of orthographic rules in digital format is a requirement, often implied, representing a prerequisite for successful and professional communication with consumers, colleagues, and partners.

However, the reality is different, and, due to the prevalence of digital language input and the absence of critical thinking, errors made in writing are numerous, contributing to the adoption and creation of a careless and sloppy style characterized by erroneous and illiterate text. Unfortunately, the consequences of general carelessness and insufficient awareness of the importance of proper application and use of orthographic rules in typing are also present in professional contexts, even at the academic level. Therefore, it is of uttermost importance to understand the relevance of correct language usage and the application of orthographic rules and to instruct young people for effective, clear, and linguistically literate communication in a rapidly changing world.

3. RESEARCH METHODOLOGY

This paper analyzes how well undergraduate students majoring in English philology apply orthographic rules in writing in digital environments and investigates mistakes made in terms of punctuation and spacing. The main aim of this study is to focus on the commonest mistakes and draw attention to a possible language transfer and interlingual influence.

The analyzed corpus comprises 126 student papers – 67 essays written in English and 59 translation tasks written in Serbian. Students were not instructed to apply any specific orthographic and typing rules; they focused on the essay structure, topic development, coherence and language precision, and the most appropriate translation equivalents in essays and translation tasks, respectively. The authors aimed to analyze those aspects of writing usually taken for granted and, therefore, did not explicitly instruct the students to focus on them, thus eliciting the desired results.

The method used in this study is quantitative and relies on error analysis. Common mistakes were identified and classified into two categories – punctuation and spacing in Serbian and English.

Regarding punctuation, the authors focused only on several aspects: the use of punctuation marks in direct speech, writing diacritics, and punctuation marks. This study aims to investigate only those aspects of orthographic conventions that are specific to typing, while general rules were not the focus of this analysis. In other



words, the analysis of general orthographic rules were not the focus in this study because the authors aimed to excerpt only those specific examples related to typing, and, thus, draw attention to a neat and careful use in everyday communication and, particularly, in formal contexts, encompassing written assignments at the university level, done by future professionals in language use and analysis.

4. RESEARCH RESULTS AND DISCUSSION

The essays written in English and translation tasks were first analyzed and the use of orthographic conventions were categorized according to the incorrect applications noticed in students' written assignments. The mistakes identified in students' papers can be classified into three areas: the use of a space, the use of symbols, and the use of punctuation.

Firstly, the analysis shows some common recursive mistakes found in students' writing in both languages, and they relate to the use of a space (a blank area used in print, separating words, clauses, and sentences). In this analysis, we combined both languages because there are no differences between the use of a space in Serbian or English. Namely, students consistently used the same way of making a space in both languages, and there are no differences identified in essays or translation tasks.

In general, the analysis shows the following common mistakes in leaving a space in Serbian and English: spaces between words and punctuation marks; the use of space within parenthesis; the use of a space before and after a dash.

1. Spaces between words and punctuation marks. When typing, after punctuation marks (a comma, question, and an exclamation mark, colon, semicolon, ellipsis) there should be one space. Mistakes identified in students' papers relate to the absence of a space after these punctuation marks (the example that illustrates such a mistake is as follows: *Despite being so naive,he...*), instead of using a space after the comma and before the word 'he': *Despite being so naive, he...*). On the other hand, what was identified as a repetitive mistake relates to leaving a space before a punctuation mark (especially before quotation marks at the beginning of the quote, usually accompanied by a space before the quotation mark at the end of the quote; an example of the incorrect usage is as follows: " *She finally decided to leave, but...* "). Another mistake identified in one paper

written in English relates to the use of a space after a word and before an ellipsis (the example is as follows: *Then I realized how much time, energy and money I have wasted, but ...*).

2. The use of a space within parenthesis. When typing, there is no space before the first and last word within parenthesis. Leaving space in such situations was also identified in a high percentage of translation tasks (almost 45%) that contained such examples in the original text in English. However, it is not certain whether those students who did not make a mistake knew the rule or just copied the way it was written in English when translating the text from the parenthesis into Serbian (the example that illustrates such a mistake is as follows: *Across the UK, there are five stages of education: early years, primary, secondary, Further Education (FK) and Higher Education (HE)*, and the translation that illustrates the incorrect usage of a space within parenthesis is: *U Velikoj Britaniji postoji pet nivoa obrazovanja: ranom osnovnom srednje, više(FK) i visoko obrazovanje (HE)*).
3. The use of space before and after a dash. In typing, there is a space before and after a dash. However, the analysis shows that students occasionally omitted a space and merged words with a dash (the example illustrating such a mistake is as follows: *The relevance of such theory-even not finally proven-is evident not only in science but everyday as well*).

Furthermore, the analysis also reveals inconsistency in the use of spacing in typing; namely, the majority of students used spacing differently throughout the same essay or translation task. Only 12 papers showed that these mistakes were recurrent, which brings to the conclusion that these students, with a high degree of certainty, did not know the rules because they consistently applied the opposite in their writing.

Secondly, the analyzed written assignments contained many mistakes related to the use of symbols, in both languages. The analysis of these mistakes shows two tendencies: the incorrect use of letters in the Serbian language, and the incorrect use of symbols representing punctuation marks (these relate to the use of a dash (–), and quotation marks. The latter relates only to Serbian because the quotation marks were found only in translation tasks; there was no direct speech used in the essays written in English, and, therefore, no reliable conclusion can be made on the use of quotation marks in English.



The following examples illustrate the commonest mistakes made in students essays written in English and translation tasks written in Serbian as regards the use of symbols.

1. These mistakes primarily relate to the way letters in Serbian were typed. 55 translation tasks were typed in Latin alphabet and only 4 in Cyrillic. Those typed in Cyrillic consistently used proper letters. However, common mistakes were identified in translation tasks typed in Latin; namely, these include the absence of diacritic symbols, and students typing wrong or non-existent letters, such as 'c' for 'ć' or 'č', 's' or 'sh' for 'š', 'dj' for 'đ', and 'dz' for 'dž'. Therefore, common mistakes found in students translations are as follows: 'ceta' instead of 'četa', 'skola' instead of 'škola', 'cup' instead of 'ćup', 'sharm' instead of 'šarm', 'dzangrizav' instead of 'džangrizav', and many other examples illustrating the incorrect use of letters.
2. In the majority of papers, in both languages, students did not use the symbol for a dash (–), but a hyphen (-); only in 7 papers, the symbol for a dash was consistently used. In translation tasks, students already had the dash used in the original, English version, used correctly as a symbol (–), but only in 7 papers the symbol was correct; other papers showed the use of a hyphen (-) instead. In essays written in English, 5 students used a dash as a punctuation mark, but in all these papers the symbol was mistyped (a hyphen used instead of a dash). The example illustrating this common mistake in students translation tasks is as follows: *People who possess intrapersonal intelligence are generally aware of themselves, their strengths and weaknesses – they are associated with introspection and self-reflection*, and the translation that illustrates the incorrect usage of a space within parenthesis is: *Osobe koje imaju intrapersonalnu inteligenciju uglavnom su svesne sebe, svojih vrlina i mana - povezane su sa introspekcijom i autorefleksijom*.

Finally, the last aspect analyzed in students' papers relates to the use of punctuation marks in direct speech in the Serbian language in translation. The commonest mistake the students made involved the use of quotation marks – instead of typing „ ”, in almost 70% of papers, students used English symbols " ". Additionally, students often omitted a comma after the quotation mark (e.g., instead of typing „Zar niste rekli da nemate

ništa sa tim?”, *pitala me je naposletku*, many students wrote "Zar niste rekli da nemate ništa sa tim?" *pitala me je naposletku*). The identified mistakes comply with the previous research results that relate to the use of punctuation marks in reported speech [10].

The analysis of students' written assignments – essays written in English and translations written in Serbian – shows several tendencies regarding the proper use of orthographic rules in typing. The first relates to the common mistakes made in both languages regarding the use of a space in typing. Namely, recurring mistakes included the incorrect connection of words and punctuation marks, such as when words followed punctuation marks (a comma, full stop, question mark, or semi-colon). On the other hand, students wrongly separated quotation marks from words within. Another repetitive mistake identified in students' translations from English into Serbian relates to the symbols used in typing – the absence of diacritic symbols in Serbian Latin, which indicates that the students used the English keyboard instead of Serbian. Apart from these symbols, other common mistakes found in students' translations include quotation marks as used in the English language – the tendency illustrates the influence of the English language on Serbian. Finally, the repetitive mistake relates to the use of a hyphen instead of a dash, which also illustrates the use of keyboard that does distinguish between the two symbols, leaving space for a mistake. Even though the outlook of a dash and a hyphen in Serbian is clearly defined and explained, there is no such consistency in the English language and it is not rare to find these two symbols interchangeably used even in formal and academic contexts, including language and linguistic-related papers.

5. CONCLUSION

This study focused on one aspect of literacy in digital environments – understanding and properly applying those orthographic rules specific for typing – spacing and the use of punctuation and symbols in writing. The aim of the research was to identify the commonest mistakes students made in typing when writing essays and translation tasks in the Serbian and English languages, respectively.

Although the need for efficient information exchange may justify some instances of incorrect application of orthographic conventions, it is crucial to emphasize the importance of cultivating proper language use in digital environments – such an approach contributes to the



development of literacy perceived in its broadest sense. David Crystal explains this phenomenon as a result of language economy and speed of communication, calling this phenomenon the principle of "save a keystroke" [11]. This study draws attention to the following aspects that should be considered when typing: respecting all orthographic rules defined for all writing environments (in handwriting and typing), using spacing properly, and using the Serbian Latin keyboard to mark letters such as 'ć', 'č', 'š', 'đ', 'ž', and 'dž'. As Piper and Klajn pointed out, an educated person knows all capital and small letters in a language – actively, to read them correctly, and passively, to write or type them [12].

Therefore, in order to develop students' literacy for the 21st century, it is important to teach students not only how to write but also how to type properly, respecting all prescribed orthographic rules. The way we write in a digital environment often says a lot about us, our level of education, literacy, and the approach we have toward work, profession, and leisure time. Early and systematic adoption of careful and correct writing will create a habit of the educated writing style; on the contrary, carelessness leads to sloppiness and an illiterate manner of communication.

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