

The Impact of Social Media and Computer-Mediated Communication on the Spelling and Orthography of English

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تأثير وسائل التواصل الاجتماعي والتواصل بواسطة الحاسوب على تهجئة اللغة الإنجليزية ونظامها الإملائي

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Abstract:

Computer-mediated communication (CMC) and social networking sites have transformed the conditions under which written English is produced, circulated, and interpreted. This paper examines how these environments influence English spelling and orthography, with particular attention to Netspeak and Facebook-speak. It also considers whether non-standard digital forms should be treated primarily as evidence of linguistic deterioration or as systematic resources adapted to the communicative demands of online interaction. The study adopts a qualitative, literature-based analytical design. It synthesizes historical accounts of English spelling with findings from previous studies of online language, including research on Facebook writing, capitalization on Twitter, and the relationship between social networking practices and students' academic writing. The analysis identifies recurrent digital orthographic features such as abbreviations and acronyms, non-standard spellings, contractions, omitted or repeated punctuation, unconventional capitalization, emoticons, hashtags, and reduplicated letters. Evidence reviewed from earlier studies suggests that some of these features may transfer into students' academic writing, particularly when genre boundaries are weak; however, the same features also perform meaningful functions related to speed, brevity, prosody, stance, emphasis, and social identity. The paper concludes that CMC does not simply damage English spelling. Rather, it creates a context in which standard and non-standard orthographic practices coexist. Educational responses should therefore emphasize register awareness and the ability to distinguish informal digital writing from formal academic writing, rather than treating digital language as inherently deficient.

Keywords: Computer-Mediated Communication, social media, English Spelling, Orthography, Netspeak, Facebook-speak, Digital Literacy.

الملخص:

أحدث التواصل عبر الحاسوب (CMC) ومواقع التواصل الاجتماعي تحولاً في ظروف إنتاج اللغة الإنجليزية المكتوبة وتداولها وتفسيرها. تتناول هذه الورقة البحثية كيفية تأثير هذه البيانات في التهجئة والإملاء في اللغة الانجليزية، مع التركيز

بشكل خاص على مصطلحي "لغة الانترنت" (Netspeak) و"لغة الفيسبوك". كما تبحث فيما إذا كان ينبغي النظر إلى الأشكال اللغوية الرقمية غير المعيارية بوصفها دليلاً على التدهور اللغوي، أم باعتبارها موارد لغوية منظمة تتكيف مع المتطلبات التواصلية للتفاعل عبر الانترنت. تعتمد هذه الدراسة على المنهج التحليلي النوعي القائم على مراجعة الأدبيات السابقة، حيث تستعرض وتحلل ما ورد في المصادر التاريخية حول الإملاء الإنجليزي، التي جانب النتائج التي توصلت إليها الدراسات السابقة بشأن اللغة المستخدمة عبر الانترنت، بما في ذلك الأبحاث المتعلقة بالكتابة على موقع الفيسبوك واستخدام الأحرف الكبيرة على منصة تويتر، والعلاقة بين ممارسات التواصل عبر مواقع التواصل الاجتماعي والكتابة الأكاديمية لدى الطلاب. يحدد التحليل مجموعة من السمات الإملائية الرقمية المتكررة، مثل الاختصارات والرموز المختصرة، والتهجئات غير المعيارية، والصيغ المختصرة للكلمات، وعلامات الترقيم المحذوفة أو المتكررة، والاستخدام غير التقليدي للأحرف الكبيرة، والرموز التعبيرية النصية، والوسوم (Hashtags)، وتكرار الحروف. وتشير الأدلة المراجعة إلى أن بعض هذه السمات قد تنتقل إلى الكتابة الأكاديمية لدى الطلاب، لا سيما عندما تكون الحدود الفاصلة بين أنماط الكتابة المختلفة غير واضحة. ومع ذلك، تؤدي هذه السمات نفسها وظائف مهمة تتعلق بالسرعة والإيجاز والتعبير عن المواقف والتأكيد والهوية الاجتماعية. وتلخص الورقة إلى أن التواصل عبر الحاسوب لا يلحق الضرر بالتهجئة الإنجليزية، بل يهيئ سياقاً تتعايش فيه الممارسات الإملائية المعيارية وغير المعيارية؛ ولذلك ينبغي أن تركز الاستجابات التعليمية على تنمية الوعي بالسجل اللغوي والقدرة على التمييز بين الكتابة الرقمية غير الرسمية والكتابة الأكاديمية الرسمية، بدلاً من التعامل مع اللغة الرقمية على أنها لغة قاصرة بطبيعتها.

الكلمات المفتاحية: التواصل بواسطة الحاسوب، وسائل التواصل الاجتماعي، التهجئة الإنجليزية، النظام الإملائي، لغة الانترنت، لغة فيس بوك، الثقافة الرقمية.

Introduction:

Digital communication has become a routine part of everyday language use. People now write not only in traditionally edited environments such as books, newspapers, and academic texts, but also in rapidly produced online messages, posts, comments, and social networking interactions. This shift has generated both concern and optimism. One common concern is that frequent exposure to abbreviated, informal, and non-standard digital writing may weaken conventional spelling practices. A contrasting view sees online communication as a productive site of linguistic innovation that expands the resources available to writers and creates new forms of literacy.

English spelling is an especially relevant area for this debate because it has never been completely regular or static. Its present form reflects centuries of historical change, borrowing, sound change, scribal practices, printing conventions, dictionary-making, and regional variation. Consequently, contemporary online variation should be examined against the broader history of English orthography rather than treated as an entirely unprecedented disruption.

The present paper investigates the relationship between computer-mediated communication and English spelling, focusing on the orthographic characteristics of Netspeak and social media language. Particular attention is given to Facebook-speak because earlier research has described it as a developing written register with recurring grammatical and typographic features. The paper also considers Twitter-based evidence on capitalization and reviews findings on whether digital writing practices influence students' academic performance.

Problem of the Study:

The central problem addressed in this paper is the tension between standard written English and the flexible orthographic practices common in online communication. Social media users frequently shorten words, omit punctuation, repeat letters and punctuation marks, use unconventional capitalization, and employ emoticons or other symbolic resources. These forms are often interpreted as spelling errors or signs of declining standards. However, research on CMC suggests that many such deviations are systematic and communicatively motivated. The problem, therefore, is not simply whether digital language differs from standard spelling, but how these differences function and whether they are transferred inappropriately into formal writing contexts.

Research Questions:

This study is guided by the following research questions:

1. What spelling and orthographic features characterize English in computer-mediated communication and social media?
2. How do Facebook-speak and related forms of digital writing differ from conventional standard written English?
3. To what extent does previous research suggest that social media language affects students' academic writing and spelling performance?
4. Should non-standard digital orthography be understood mainly as linguistic deterioration, or as a functional and innovative form of language use?

Aims of the Study:

This study aims to:

1. Describe the historical background necessary for understanding variation in English spelling.
2. Identify major orthographic features associated with CMC, Netspeak, Facebook-speak, and related social media practices.
3. Synthesize findings from previous research on the relationship between social media use, spelling, and academic writing.
4. Develop an evidence-based interpretation of digital orthographic variation and its implications for language education.

Significance of the Study:

The significance of this study lies in its attempt to connect the historical variability of English spelling with current forms of digital communication. By doing so, it avoids treating social media language as an isolated phenomenon and provides a broader basis for evaluating claims that the Internet is 'ruining' English. The discussion is also educationally relevant because teachers and students increasingly move between formal academic writing and informal digital environments. A clearer understanding of register differences can support more effective instruction in spelling, writing, and digital literacy.

Limitations:

This paper is a literature-based analytical study rather than an original participant-based empirical investigation. Its conclusions depend on the scope and contexts of the studies reviewed. Several cited studies were conducted with specific groups, such as high-school learners or users of particular social networking sites, and therefore their findings cannot automatically be generalized to all English users. In addition, digital communication changes rapidly; platforms, conventions, and user practices may evolve faster than the published research describing them.

Literature Review:

The Historical Development of English Spelling:

But how did it all start? And how did the English spelling get where it is now? Before the arrival of the Anglo-Saxons in about 449, Britain was first inhabited by tribes who spoke Celtic, known as the Britons. In the 1st century CE, the Romans invaded these tribes, but Celtic was not given up until the 5th century, while Latin was used in the administration, by the Roman rulers and by the educated Britons. Moreover, the upper class in the west and north still used Latin, even after the Romans were no longer rulers. When the Germanic tribes arrived and settled, they brought with them a writing system known as the runic alphabet made of 24 runes to which 7 more were added after being brought to Britain. The runes are relevant to spelling because they offer "an alternative insight into the Anglo-Saxons' ideas about sound-symbol correspondences" and because some of them were used to write Old English in addition to the Roman alphabet. (Upward and Davidson 2011: 14-17)

The Christian missionaries brought the Roman alphabet back to England in the 6th century and, because they had the goal to introduce Christianity, so they needed to write the language down and use it to fulfill their purpose. However, the monks faced a big challenge: they had more sounds to represent than there were letters in the Latin alphabet. To a certain extent this is still a problem, because the language has forty phonemes and only twenty-six letters, so it is impossible to have a sound-symbol correspondence. (Crystal 2012: 17, 22)

Going back to the Christian missionaries, as Crystal (2012: 23) mentions, they had to use twenty-three letters to spell at least thirty-seven phonemes and, since there was a great distance between the monasteries, different solutions were found in different regions. For example, to solve the 'th' problem, a new letter could be created or borrowed from another writing system or existing letters could be used in different ways (e. g. doubling the t, using two letters to spell one sound – 'th', 'dh', putting two letters together, or adding a diacritic or an accent to a letter). Most of the monks chose the new letter option and the letters known as 'eth' and 'thorn' were introduced into Old English. Later they also started using the rune named 'wyn' for the /w/ sound and the 'ash' for the /æ/ sound. From the new total of twenty-six letters q (replaced by 'cw'), k, z, and x were rarely used. J and v were not introduced until the Middle Ages and every letter was pronounced. (Crystal 2012: 23-25)

The Old English alphabet also had some weaknesses mainly stemming from the fact that there was no one-to-one correspondence between symbols and sounds. For instance, the consonants h (e. g. in hand = 'hand' versus in miht = 'might') and c (e. g. in cald = 'cold' versus in cild = 'child') were used to spell two different sounds. The situation was even more problematic with g which was used to spell three sounds (/g/, /j/ and a third one which does not occur in Modern English). In addition, the sequence sc was used to spell both /ʃ/ and /sk/. A similar problem affected the vowels, since each of them were used to spell both the short and the long sound (e. g. 'good' and 'God' were both spelled god). Since it was difficult to distinguish between a short and a long vowel or diphthong, a solution had to be found.

Different options were available: to double the long vowels, to use two different vowels to show a long one (e. g. sea, weak), or to use diacritics. (Crystal 2012: 29-32)

The weaknesses left unsolved by the Christian missionaries had to be solved by the French scribes after the Norman invasion of 1066. Around 1150 Middle English developed and some major changes took place in the grammar, vocabulary, pronunciation, and spelling of English. As the vocabulary doubled in size with the loans from French and Latin, it was necessary to also spell all these new words.

A first problem that was solved was that of the vowel length. To show that a vowel was long a silent e was added (e. g. hop versus hope) and to show that a vowel was short the next consonant was doubled (e. g. hopping versus hoping). Silent letters were introduced, the inflections of Old English disappeared, and long consonants were no longer pronounced. The problem was that the scribes used three different methods to show that a vowel was long (i. e. double the letter, combine two letters, and add a silent e) and this led to confusion. (Crystal 2012: 34-35)

Other changes brought by the French scribes were: replacing the thorn and eth letters with th, using sh instead of sc to spell /ʃ/, replacing c with ch in words such as child, using gh instead of h in words like might, putting dg instead of cg or gg at the end of words such as hedge, and adding a t before ch to spell /tʃ/ (e. g. hatch, wretch, etc.). An important novelty was also the introduction of w used in the place of the Anglo-Saxon letter called wynn (p). (Crystal 2012: 44)

A first big change was giving up the alien looking letters known as ash, thorn, eth, wynn, and yogh. Wynn was replaced by w, eth and thorn by th, and ash either by a (the short sound) or by æ, ee, or e (the long sound). However, æ was kept in Latin words such as Cæsar and encyclopædia. Regarding yogh, g was used for the /g/ sound and dg for the sound in words such as hedge. A third use of yogh was at the beginning of words such as year, yet, yonder or yule where, as we see, it was later replaced by y. (Crystal 2012: 56)

A significant cause of many irregular spellings that appeared in Middle English was the problematic cursive handwriting of the scribes. They used what were called minims and an i was a minim without a dot, an n, u, or v two minims, and an m or w three. Since it was hard to interpret them in words such as mine, nun, time or minim, something had to be done to make things easier and clearer. Besides adding a dot, a flourish or a tail to the letter i, sometimes it was replaced with y, which ended up being preferred at the end of words. This explains why we have body in the singular and bodies in the plural, since in the latter situation the i is no longer final. The problem is that y and ie started being used interchangeably and this led to variation. Nowadays the difference is still present and in British English we have tyres, gypsies and cyphers while in American English tires, gipsies and ciphers are used. Another solution for the minim problem was to replace u with o (e.g. worry, worse, worm, come, love, etc.), but in the end the context was the most important aspect when reading this problematic handwriting. (Crystal 2012: 70-72)

In the 15th century two major events affected the spelling of English and one of them was the Great Vowel Shift. This process which began in the 15th century and lasted for about 200 years meant changing the pronunciation of long vowels. These changes can explain why today we have so many irregularities because in numerous words the spelling reflects the old pronunciation. For instance, mice was pronounced /mi: s/, loud – /lu: d/, and goose /go: s/. Where does the difference in pronunciation between child and children stem from? Again, the Great Vowel Shift helps because the long vowel in child changed, while the short one in children was not affected. And where does the difference between decline, combine, shine, polite as opposed to magazine, police, routine stems from? The first ones were in English when the Great Vowel Shift took place while the second group appeared after it so the long vowels in these words were not affected. (Crystal 2012: 84-85)

The second major event of the 15th century that had a great impact on spelling was the arrival of printing in 1476 thanks to William Caxton who, until his death in 1491, managed to publish more than a hundred works (Crystal 2012: 88). Of course, after that, other printers continued his work.

Introducing printing did bring some order by improving the punctuation and completely leading to giving up the Anglo-Saxon letters yogh, thorn and eth, but the variation was still very significant. This is because the printer was, at first, less interested in constant, uniform spelling, and more interested in making the pages look attractive. For example, if necessary, he added e or other extra letters to words to have lines of an even length. Most of these e s were eliminated, but some remained in words such as have, give, live, gone, come or done. It is assumed that the h in ghost also exists due to Caxton, since it seems to be the result of a Flemish influence and one of his assistants spoke Flemish. (Crystal 2012: 88-90). All this flexibility in spelling meant that there was still a lot of variation.

As the variation and irregularities in the English spelling increased, reforming the spelling became a necessity in the 16th century when the situation became even more difficult with the arrival of numerous Latin and Greek borrowings in the context of the European renaissance of learning. In some cases, the situation went out of control. For instance, after an e was added by printers to fill the line, instead of

dropping it some came with the idea to mark the short vowel by doubling the consonant. This led to long forms such as *didde*, *hadde*, *sadde* or *putte*. (Crystal 2012: 93)

Determined to bring some order in the English spelling, Richard Mulcaster came up with some rules in his book *Elementarie* (1582). One rule was to eliminate the useless letters in words like those previously mentioned and to add those that were necessary, encouraging the addition of a silent *e* and make a distinction between *mad* and *made* and other similar pairs. Mulcaster couldn't fix all the problems, but half of his proposals are still used today. (Crystal 2012: 94)

However, having and following models was not enough and the reformers resorted to an important principle to explain and regularise English spelling – etymology – and the language used to justify the changes was Latin. For example, a rule regarding silent consonants said that they must be written to “discover the original derivation” (Crystal 2012: 98), as it is the case with *debt* from the Latin *debitum* and *doubt* from *dubius*. Instead of choosing from the many variants *det*, *dett*, *dette* or *deytt*, Latin was resorted to and a silent *b* was added to *debt*. And this happened to many other words such as *doubt*, *subtle*, *arctic* (did not have a *c*), *receipt* (did not have a *p*), *salmon*, *balm* and *fault* (did not have an *l*). Sometimes confusions were made and an example is the word *apron* coming from the French *naperon*. What happened here is that people heard “a *napron*” and understood “an *apron*”. (Crystal 2012: 98-100)

In the 18th century the importance of spelling increased and people who wanted to know how to spell resorted to a simple solution – a good model. In Britain, the most influential model and personality was Dr Johnson, an authority in the eyes of the people, whose dictionary brought some stability in the English spelling. Etymology is very important for Johnson since, when it comes to variation, he mentions that his decision is based on the source language of the word preferring, of course, the prestigious Latin. Among his contributions, Crystal (2012: 119) mentions distinguishing practice the noun from practise the verb and following the same patterns chooses the forms *pretence* and *defence*. However, he did not make a distinction between *flower* and *flour* (both spelled *flower*), he opted for the forms *fewel*, *raindeer*, and *villany*, and he varied between *-l* and *-ll* (*downfal* – *pitfall*) and *-or* and *-our* (*confessor* – *oratur*). As Johnson himself admits, variation and spelling problems were still present. (Crystal 2012: 119, 121)

In America, another personality provided people with a model, the teacher Noah Webster who published *The American Spelling Book* in 1783. Webster was strongly influenced by political factors, since he wanted to develop an American standard of English for a new independent nation, making an analogy between the independence in language and in governing. (Crystal 2012: 122) Johnson's contribution is recognized, but many changes that initiate the current differences between American and British English are done. Among them Crystal (2012: 122-123) mentions dropping the final *k* which was introduced by Johnson in words such as *music* and *critic*, replacing *-our* with *-or* (e. g. *favor*, *flavor*, *humor*, *labor*, *favorite*, etc.), using *er* instead of *re* (*center*, *fiber*), and coming up with individual spellings such as *caldron* (British *cauldron*), *mustaches* (*moustaches*), *wagon* (*waggon*) or *story* (*storey*).

After the influence on spelling by these two central personalities, the most important role in the history of the English spelling was played by printers and publishers. Called ‘the age of the dictionaries’, the 19th century was marked by the publishing of many dictionaries and books on the grammar, punctuation, pronunciation and spelling of English. Only in the first half of the century sixty-five dictionaries were published in England and thirty in America. To these we add 200 more specialised dictionaries and glossaries and thirty encyclopaedias, which appeared as a result of the Industrial Revolution that brought about more knowledge and terminology in multiple scientific and technological domains. (Crystal 2012: 125)

After looking at the evolution of the English spelling and at the challenges that it faced in the past the question is:

- “What is the situation in the contemporary writing?” and the answer is that variation has not disappeared, it has actually increased. Why?

Crystal (2012: 130-132) identifies many possible factors such as the differences between American and British English or the different intuitions over which variant of a specialism is most suitable considering its content (e. g. the conservative *ae* spelling is probably found in relation to historical subjects, not in relation to modern ones). Since spelling can help people express their identity, the different cultural traditions are also a factor: religious people will use *nocturn* while musician and artist opt for *nocturne*. Variation rises even more if phenomena such as capitalisation (e.g. *prime minister* or *Prime Minister*, *moon* or *Moon*), spacing and hyphenation (*flower pot*, *flower-pot*, or *flowerpot*), or the use of the apostrophe are taken into account. The so-called exotic loanwords, also described by Crystal (2012), are another very important source of variation since they do not respect the spelling conventions of English bringing unpredictable ones from their language of origin.

English spelling has developed through a long sequence of linguistic and social changes. Early English writing drew on both runic and Roman alphabetic traditions, and writers faced the problem of representing more speech sounds than the Latin alphabet could easily encode. This produced variation from the beginning and encouraged different regional solutions for representing sounds. Later developments introduced further complexity rather than complete regularity.

The Norman Conquest brought major French influence into English writing. French scribes contributed conventions such as the replacement of older letters, the increased use of digraphs, and new strategies for marking vowel length. The growth of French and Latin vocabulary also expanded the number of spelling patterns in the language. During the Middle English period, scribal practices, analogy, word origin, and regional variation all contributed to the coexistence of alternative forms.

The Great Vowel Shift created a further mismatch between pronunciation and spelling because many spellings became established while pronunciation continued to change. The arrival of printing in the fifteenth century gradually increased consistency, but printers themselves sometimes introduced variation. Later reformers, dictionaries, publishers, and influential figures such as Samuel Johnson and Noah Webster contributed to standardization while also producing national differences, especially between British and American English. As Crystal (2012) and Upward and Davidson (2011) show, modern English spelling is therefore the result of historical layering rather than a perfectly regular sound-to-symbol system.

This historical perspective is important for the present topic. Variation in spelling is not a new phenomenon created by the Internet. What digital communication changes is the speed, visibility, frequency, and social distribution of variation, as well as the functions that writers assign to non-standard forms.

Computer-Mediated Communication and Netspeak:

As technology has been evolving continuously, the Internet has acquired a central role in people's lives, as it is used with various different purposes such as information, relaxation, or communication. There are various new media where language is used online in different ways and with different goals. We use and read pieces of language on the Web, in e-mail, in chats and instant messaging, on blogs and on social media, so it is expected for the Internet to have a great impact on language in general, and on its spelling in particular.

Quoted in Crystal (2006: ix), the inventor of the World Wide Web, Tim Berners-Lee, describes the Web as being "more a social creation than a technical one" which help fulfilling "the dream of people-to-people communication through shared knowledge". Nowadays people all over the world are connected and can easily communicate online, irrespective of the boundaries between them. Looking at the Internet from this social perspective involves placing language in a central position which leads to Crystal's (2006: x) claim that the Internet is a "linguistic revolution", thus rendering the relationship between language and the Internet (and how the two influence each other) as a very prolific research topic.

Typically, people look at the effect of the Internet on language with anxiety and fear, anticipating that it will lead to a degradation or even a loss of the standard. The fact that online communication allows for a looser, more relaxed language usage gives rise to the worry that literacy and spelling will be damaged beyond repair. In contrast, there is also a fear that language will become less creative and flexible "as globalization imposes sameness" (Crystal 2006: 2). As Crystal (2006: 2) aptly notices, such scepticism accompanied the appearance of many new means of communication: the Church initially perceived printing as "an invention of Satan", the telegraph was claimed to "destroy the family and promote crime", the telephone undermined society, while broadcasting was described as "the voice of propaganda". Similar to all these novel technologies, the Internet also triggered fear and anxiety.

But to what extent is the effect of the Internet on the English language and in particular on its spelling a negative one? And is the way language is used online fundamentally different from the previous standards and usages? Moreover, a question that Crystal (2006: 6) also addresses, can we talk about a uniformity or homogeneity when it comes to the language used on the Internet, or are we rather dealing with "distinct dialects"? Did the Internet give rise to a new language, called 'Netspeak', 'Netlish', 'Internet language', 'electronic language', or 'computer-mediated communication (CMC)' among other names (Crystal 2006: 19)? These are some of the issues that will be dealt with in the remainder of this paper, mainly focusing on the graphological features (i. e. spelling, capitalization, punctuation, means of emphasizing, etc.) of the English language used online. And in order to find an answer to these questions, I will mainly resort to Crystal's (2006) analysis of the seven Internet-using situations (e-mail, chat groups, virtual worlds, World Wide Web, instant messaging, and blogging) that he identifies and to Squires' (2016) research on the relation between the English writing system and the computer-mediated communication.

But what does computer-mediated communication refer to and what implications does it have for the English writing system? CMC includes all instances of “communication that occurs via the mediating technology of computers and their screens” (Squires 2016: 471), as written English undergoes a transfer from one medium to another, namely from the paper to the screen. These computer technologies enable English to be used with new and very diverse social purposes, thus making CMC the main topic of many linguistic research papers.

A pioneer in analysing “the relation between computer use and language”, Baron (1984 in Squires 2016: 472) is the first to describe CMC as a particular mode of communication which, in some contexts, replaces both written and spoken language. Later, in her study of simultaneous computer messages, discussion forums, and “email sent between employees in a high-tech workplace”, Murray (1988 in Squires 2016: 472) notices the presence of writing economization strategies in computer messages, as a consequence of the space and time constraints and successfully identifies emblematic practices such as abbreviations (e.g. <u> for ‘you’), respellings (e.g. <enuf> for ‘enough’), using asterisks for emphasis (e.g. <*really*>), or using serial punctuation marks (e.g. <??>). Such economization practices of CMC are also identified by Ferrara et al. (1991 in Squires 2016: 473), along with the inconsistencies regarding capitalization, punctuation, and spelling. Moreover, in an analysis of Internet Relay Chat (IRC), Werry (1996 in Squires 2016: 473) identifies various innovative features of the English writing system such as “abbreviations, acronyms, reduplicated letters, pause- or tempo-indicating punctuation, nonstandard spellings, and emoticons” claiming that these strategies are meant “to compensate for the lack of intonation and paralinguistic cues that interactive discourse imposes on its users” (Werry 1996 in Squires 2016: 474). It is also important to mention Herring’s study (2007 in Squires 2016: 474) which took into account various factors (“technological affordances, writing system/script, language variety, and social context”), introducing the idea that CMC was not a “homogeneous genre”.

Computer-mediated communication refers broadly to communication carried out through digital technologies. As the Internet became increasingly social, written interaction began to combine characteristics traditionally associated with both speech and writing. Crystal (2006) uses the term Netspeak to describe language shaped by the affordances of online communication, while Squires (2016) emphasizes that CMC is variable, socially meaningful, and responsive to technological context.

Online interaction often places a premium on speed, brevity, immediacy, and interpersonal expressiveness. At the same time, ordinary text lacks many resources available in face-to-face conversation, including intonation, gesture, facial expression, and other paralinguistic cues. Users therefore adapt orthographic resources to compensate. Punctuation, capitalization, repeated letters, emoticons, and symbolic forms can take on functions that extend beyond conventional spelling.

Orthographic Features of Digital Communication:

One of the most debated features of the so-called Internet language is the economizing strategy of abbreviation. In CMC, single letters or numerals can replace entire syllables as it is the case in examples such as those under (1a). While many see these abbreviations as damaging for spelling, they can also be regarded as innovative. As an effect of the technological development, there also appeared many acronyms such as those under (1b) and these, of course, did not trigger any negative evaluations. Also typical of the internet language, contracted forms (e. g. gonna, dunno, wanna, usta, sorta – Crystal 2006: 192), are more similar to the examples under (1a), in that they can be perceived as having negative effects on spelling, not as being innovative.

1. a. <b4> ‘before’, <brb> ‘be right back’, <ic> ‘I see’, <cu> ‘see you’, <gr8> ‘great’, <l8r> ‘later’, <2l8> ‘too late’, <tx> thanks, <wrt> ‘with respect to’ (Crystal 2006: 91-92)

Another debated strategy, also perceived by some as negative, is that of capitalization. In CMC writing the tendency is to use lower case everywhere. The desired effect to save time and space leads to the production of entire sentences without including any capital letter. Even the first-person pronoun <i> is written with a lower case and, according to Squires (2016: 481), this “carries a social meaning related to playfulness”. Lower case writing dominates so, consequently, when capitalization occurs it is perceived as “a strongly marked form of communication” (Crystal 2006: 92). Writing only in capitals is perceived as shouting and is avoided, while including only some words in capitals is an emphasizing strategy.

Also related to the use of capitals is another unique feature of Internet graphology known in the literature as bicapitalization (BiCaps), incaps, intercaps, or midcaps (Crystal 2006: 93), but also as the more picturesque CamelCase and BumpyCase (Crystal 2012: 133). This phenomenon, illustrated under (2a), involves the usage of two capitals, one of them placed in the middle of a word, typically a brand name. Capitalization becomes problematic and criticized in brand names such as those under (2b), where the initial letter is a lower-case so it is very problematic to use such names at the beginning of a sentence.

2. a. AltaVista, AskJeeves, DreamWorks, HarperCollins, PlayStation, YouTube, MasterCard, QuarkXPress, SpongeBob SquarePants (Crystal 2012: 133)

In her discussion of CMC phenomena that carry social meaning, Squires (2016: 480) also mentions the omission of apostrophes in contractions or possessive nouns (e. g. < don't >). Noticing that omission is more commonly used among males than among females, the linguist assumes that using such non-standard forms is a way of displaying and performing masculinity.

Another spelling convention used in the Internet language, but frowned upon by some people, is the replacement of -s by -z in some plurals (e. g. gamez, serialz, downloadz, filez, etc.). In spite of criticism of those who favour traditional writing, it is typical of online communication for various non-standard spellings to be used and accepted, without being interpreted as indicative of a poor education. (Crystal 2006: 93)

Crystal (2006: 94) also mentions some less frequently encountered examples of deviant spellings such as the forms phreak, phreaker, phreaking instead of freak, the usage of the dollar and pound signs in examples such as Micro\$oft and AO£, and some deviant spellings typical of teenage users such as kool [cool] and fone [phone], or the practice of replacing the lower-case o with a zero (d00dz [dudes], l0zers [losers]) or with a percentage sign (e. g. c%l).

Punctuation in CMC is also an aspect open to criticism. Following the same principle of economy, the tendency is to reduce or even completely eliminate punctuation marks, which can be perceived as a loss, since punctuation is "the chief means a language has for bringing writing into direct contact with (the prosody and paralinguistic of) speech" (Crystal 2006: 94). In strong contrast with this criticized preference of giving up punctuation are the unusual and innovative uses of punctuation marks. Particularly in instant messaging, punctuation marks can appear alone, without accompanying any linguistic content (e. g. <!>, <?>, <?!>, etc.) (Squires 2016: 481). To these we add the different unusual combinations used to express a pause (ellipsis dots in any number (...), repeated hyphens (- - -), and the repeated use of commas (,,,)) and the usage of punctuation marks in an exaggerated or random manner (!!!!!!! or £\$£\$%!) (Crystal 2006: 95).

It is very important to understand and accept the idea that misspellings, deviant spellings and the usage of non-standard forms are typical of Internet language, in particular in online communication types such as e-mails, instant messages, or social media. Taking into account the speed of typing and the absence of correction or editorial revision, seeing such forms will not be interpreted as indicative of the writer's faulty educational background and abilities (Crystal 2006: 116). Regarded by some as enemies of standardization, the "loose and playful" (Crystal 2006: 133) usages of spelling and punctuation can also be perceived as creative and innovative.

In an attempt to find out whether what he calls Netspeak (i. e. computer-mediated communication) is in any way a different and unique form of communication, Crystal (2006: 51) compares this so-called electronic language to the written and the spoken one. The conclusion is that, even if Netspeak is more similar to the written language and also shares a few features with the spoken one, it is identical to neither of them and has some features and properties that neither of them has. This is why Netspeak is described as "a new species of communication" (Crystal 2006: 51).

One issue that triggered innovation in the computer-mediated communication is the absence of prosody and paralinguistic in writing. Elements such as "vocal variations in pitch (intonation), loudness (stress), speed, rhythm, pause, and tone of voice" had to be replaced somehow and some solutions were using spelling (repeated letters: aaaaaahhhhhh, hiiii, oooops, soooo), punctuation (repeated punctuation marks: no more!!!!, who he?????, hey!!!!!!!!!!!!), the use of capitals (all capitals for shouting), spacing (letter spacing for 'loud and clear'), and special symbols for emphasis (word/phrase emphasis by asterisks: the *real* answer) (Crystal 2006: 37).

However, these solutions were rather limiting and this limitation led to the appearance of emoticons defined as "combinations of keyboard characters designed to show an emotional facial expression" (Crystal 2006: 39). According to Squires (2016: 479), emoticons have different interpretations: some see them as representations of emotionality meant to replace the facial expressions of face-to-face conversations, others interpret them as pragmatic markers which indicate how certain speech acts should be interpreted, while a few perceive emoticons as politeness markers useful in face-threatening situations. Still, the usage of these images which depict both facial expressions and other items (animals, food, vehicles, etc.) have a constrained usage, depending on the capabilities of the device and app used to write or read them (Squires 2016: 475).

Besides emoticons, verbal glosses can also be used to fill in the empty place of kinesic and proxemic features, since these glosses allow for a higher degree of variation: <Eagle smiles sympathetically at Gunner>, <Spoon nods in greeting>, <smirk>, <laugh>, etc. (Crystal 2006: 42).

Squires (2016: 479) also analyses the use of multiple iterations of a letter to indicate a longer pronunciation (e. g. <sooooo>) as a carrier of emotive inflection as a result of the lengthened pronunciation. This feature is also called expressive lengthening or letter reduplication.

Another well-known symbolic resource codified in CMC is the hashtag <#> (e. g. #Thor, #Chargers, #Cricket, #Likeminds, #Fail). This symbol precedes and indicates a topic, simultaneously creating an automatic link that goes to the content for which the hashtag was used. This symbol is typically used on social media, especially on Twitter, where the hashtag is central to discourse (Squires 2016: 476). Both hashtags and emoticons reconfigured and enriched the resources available to written English.

Squires (2016: 483) concludes that the writing system used in CMC is a dynamic, complex one, influenced by different social factors. The so-called electronic language varies, it has different features and is used differently depending on the situation, on the purpose, on the genre and author, and also on the technological properties of the device that the author uses. New symbols or new uses of old symbols will constantly appear and facilitate people's attempt to express themselves in writing.

Across the literature reviewed in the original paper, several recurrent features are associated with digital writing: abbreviations and acronyms, non-standard or phonetic spellings, preference for contracted forms, omission of punctuation, repetition of punctuation marks, reduced or unconventional capitalization, emoticons, hashtags, and reduplicated letters. These features can economize effort and space, but they can also encode emphasis, emotional stance, prosodic information, and group identity.

Heath's (2018) analysis of capitalization on Twitter is particularly relevant because it challenges the assumption that non-standard capitalization is random carelessness. The study argues that all-capital and single-word capitalization patterns can signal prosodic heightening, focus, volume, pitch, or emphasis. From this perspective, orthographic deviation may be systematic and functional rather than merely erroneous.

Social Networking Sites and Facebook-speak:

Social networking sites are defined as "web-based services that allow individuals to construct a public or semi-public profile [...], articulate a list of other users with whom they share a connection and view and traverse their list of connections" (Pérez-Sabater 2013: 82). On these sites the users make their own list of connections, so the audience is made more or less of acquaintances, of people that the users knows, typically called on social media "friends". What is social media? Roelofse (2013: 13-14) describes it as representing "forms of electronic communication through which users create online communities to share information, ideas, personal messages, and other content".

One of the most popular social network sites, available to users all over the world is Facebook, an online network initially created in 2004 only for on campus Harvard students, which became open in 2006 (Roelofse 2013: 10). On this social site users are able to create their own online profile where they can list "personal information and interests" (Pérez-Sabater 2013: 2), to connect with people they already know, and to meet new people and add them in their friends list. Among the features of the website Pérez-Sabater (2013: 3) mentions "communication through private or public messages, a chat, online fora, photos, videos, links, a personal Wall, and News Feed, where friends or participants can post their messages and comment on topics".

In a description of the communication on Facebook, Androutsopoulos (2015: 190) claims that, on this site, networked individuals who share to a certain extent "histories, experiences, and linguistic repertoires" produce and consume "semi-public communication". Why semi-public? Because the "audience" of the content that the user posts is made of people in his/her friends list, whom he/she presumably know. In this list, in the user's online social network many different offline social networks (e. g. old schoolmates, colleagues, family members, neighbours, friends, international acquaintances, etc.) are co-present and this is known in the literature as 'context collapse' (Androutsopoulos 2015: 190). This context collapse may give rise to difficulties for the user when it comes to language choice.

But how are social networking sites in general, and Facebook in particular, connected to the study of the English language and to its spelling? As a new, widespread, popular and thus powerful medium of communication, a new, different and unique environment where language is used, Facebook must have an impact on English and its spelling. Roelofse (2013) even postulates and supports the existence of a new genre or register called Facebook-speak which he regards in his study as "a developing written register with a set of grammatical and typological features associated with digital literacies, such as deliberately incorrect spelling, lack of punctuation, excessive use of abbreviations, and so on" (Roelofse 2013: 3). The researcher claims that these features are an effect to the speed and limited space (or rather preference for brevity, since reactions are expected to be fast, and people's attention span seems to be decreasing continuously) characteristic of digital communication.

Assuming the existence of Facebook-speak raises many other questions and issues. If such a genre exists, which are its features? How does it impact language and, in particular, spelling? Given the fact that it allows grammar mistakes and non-standard spelling, and that it is very popular among teenagers,

does it negatively affect students' academic performance? And should such innovative new digital literacies be incorporated into the educational system, instead of being regarded as the enemy of language by the majority of teachers? Moreover, taking into account the fact that English is the most widespread language on this social networking site, how is it used by non-native speakers, what role does it play, and how does it interact with the various native languages of Facebook users all over the world, who switch to English?

In an analysis of the relationship between Netspeak (language used on the Internet, in computer-mediated communication) and the English spelling, we have already established that, partly due to the need for speed and brevity and partly to compensate for the lack of prosody and paralanguage typical of the spoken language and face-to-face communication, the spelling of the English used online has some specific distinguishing features. Among them we identified abbreviations and acronyms, non-standard spellings, a preference for contracted forms, omission or reduplication of punctuation marks, absence or innovative usage of capitalization, emoticons, and reduplicated letters.

In this section we will take a closer look at the English spelling on Facebook, by mainly resorting to the research studies conducted by Roelofse (2013) and Pérez-Sabater (2013). Roelofse's (2013) study examines the effects of Facebook-speak on the written academic work of students in a Western Cape high school and its participants are 44 Afrikaans medium learners, 44 English medium learners, and the history and English teachers of these students. Using the questionnaire method, the researcher investigated "(1) the frequency of Facebook use, (2) learners' language proficiency, (3) teachers' approach to language policy" (Roelofse 2013: 17) and he included an exercise to identify the Facebook-speak features and to see to what extent these features were also transferred in the students' academic written work.

The secondary study this section resorts to is that conducted by Pérez-Sabater (2013), who looks at the writing conventions on Facebook. The researcher tries to discover whether posting comments on Facebook can be regarded as conventionalized genre of CMC and she does this by looking at a corpus collected during 2009 and 2010 consisting of 300 comments posted to the official Facebook pages of European and American universities such as "the University of Southern Denmark, The University of Edinburgh, The University of Manchester, The University of Oxford, The University of Warwick, Florida State University, Ohio State University, The University of Harvard, The University of Texas, and The University of Washington" (Pérez-Sabater 2013: 84). In an analysis of 150 native and 150 non-native Facebook comments, the researcher tries to determine their degree of informality and orality by examining the existence of salutation, opening, pre-closing and closing formulae (using such formulae typical of written texts is assessed as a mark of informality). Pérez-Sabater (2013) also discusses the difference between the comments of native and non-native speakers of English.

Roelofse's (2013) expectations regarding Facebook-speak features were that he would identify spelling errors or non-standard spellings, lack of punctuation, over-punctuation, the exclusion of functional words, the excessive use of abbreviations and acronyms, and the incorporation of emoticons.

In the part of the questionnaire where the students were asked to mark the features that they used on Facebook, they admitted that their writing had features such as "spelling mistakes, punctuation inaccuracies, excessive use of particular punctuation marks, dismissal of functional words, and the excessive use of abbreviations and acronyms" (Roelofse 2013: 22). From these the excessive use of abbreviations and acronyms seems to be the most pervasive, with 60% of the students admitting they use these shortened forms, followed by spelling errors (44%), absence of punctuation marks (42%), and over-punctuation (33%) (Roelofse 2013: 36). Teachers also report that students have a big problem with spelling, with one of them claiming that "spelling is naturally an even bigger problem, especially in Afrikaans because they usually SMS and Facebook in mixed English" (Roelofse 2013: 34). Another teacher reports that students shorten words, do not use capitals and punctuation and use incorrect (non-standard) spellings (Roelofse 2013: 37).

Roelofse (2013: 37) assumed that features such as shortened words, the absence of punctuation, or the use of non-standard spellings also to shorten the messages, are an effect of the sought-after speed of communication on Facebook.

The most interesting is to look at the students' answers and results regarding the exercise. This exercise involved writing a letter of maximum 50 words to a friend to tell him/her about the experience at the recent Olympic Games. Roelofse (2013: 37) anticipated that he would identify features such as punctuation errors, the absence of caps at the beginning of sentences or in people and place names, over-punctuation, or the use of abbreviations and acronyms (e.g. ROFL = rolling on the floor laughing, LOL = laughing out loud, LTM = listening to music).

The results met the expectations, but besides the previously mentioned features, other unexpected ones were encountered – non-standard use of tenses, non-standard sentence structures and emoticons – the former being relevant for our discussion on spelling. Again, acronyms (most frequently identified:

G2G = 'got to go', LOL = 'laughing out loud') and abbreviations (most frequent: thanx = 'thanks', u = 'you', 2 = 'to', whn = 'when') together with punctuation errors were among the most pervasive features, but came only after the nonconventional forms of spelling. Relevant examples are those under (3) below. They have many nonconventional spellings, serial punctuation marks are used, and acronyms and abbreviations are also present.

It is also interesting to look at Roelofse's comparison between the Afrikaans medium participants and the English medium participants. The latter seem to be more influenced by the Facebook-speak and this may be due to the fact that they are "overly exposed to popular English media via television, English books, radio, and Internet" (Roelofse 2013: 46). However, this argument can also hold for the English medium participants, so maybe the cause of the difference is simply the level of their English knowledge.

Turning to Pérez-Sabater's (2013) study on the degrees of formality/informality of native and non-native English speakers on official Facebook pages of universities, we notice that she identified features also discovered by Roelofse (2013). One of them is the reiterative use of exclamations at the beginning of posts (e. g. good day to all!!, fantastic news!!!, Wow!!) which, according to Pérez-Sabater (2013: 87) conveys the comments' playful and informal character. Exclamations are also found in closings, together with emoticons, most likely in an attempt to express various sentiments. Other Facebook-speak features described by Pérez-Sabater (2013: 89) as informal are the absence of capital letters and punctuation, spelling mistakes, and emoticons. These are illustrated in examples such as that under (6) below.

Pérez-Sabater (2013: 90) concludes that the tendency towards informality typical of CMC is also present on Facebook, but the problem with Facebook and with online genres in general is that their traits are not conventionalized enough, which makes it difficult for individuals to identify and process the genre easily, without much effort. The researcher also identifies variation between Facebook users, which she partly attributes to this conventionalization problem claiming that "the use of Facebook is still in the process of becoming conventionalised; the stylistic variation perceived may be due to the novelty of the tool, to the fact that Facebook is a new communication tool and needs time to evolve and establish itself" (Pérez-Sabater 2013: 90).

However, the variation that Pérez-Sabater (2013) identifies between the native and non-natives speakers of English, with the latter showing a preference for a more formal style than the former, who avoid the use of any formality, may also be triggered by the fact that the non-natives associate formality with linguistic correctness and try to prove that they are proficient English users, particularly because they are probably writing on pages of universities where they want to be or already are students Pérez-Sabater (2013: 90). A more formal style also arises when a university official answers the students' questions.

Going back to the feature of capitalization, Heath's (2018) analysis of the interpretation of capitalization usage on Twitter, a SNS similar to Facebook, also very popular, is also interesting and relevant to our discussion. In her study on a Twitter corpus which involved the testing of readers' interpretations of different capitalization patterns, the linguist manages to prove that capitalization is not an emotive strengthener, but an indicator of prosody in the text. This is because the lack of prosody in online communication is compensated through punctuation, spelling and capitalization features. The all-caps pattern marks a "heightening of prosodic features (pitch, volume, speed, etc.)" (Heath 2018: 7) and it can be used for both happy and sad emotions (not only of anger, as previously presumed), while the single-word capitalization pattern marks either informational or contrastive focus, thus replacing heightened pitch or volume.

Heath (2018: 2) has an interesting approach to the orthographic deviations on social media, claiming that their systematic nature shows that they should be interpreted as stylistic choices, not as typos and signs of carelessness, especially since these intentional deviations are meaningful, having a prosodic role. The next part of this section will develop around this issue, attempting to argue whether non-standard features of the language on social network sites, in particular of Facebook-speak, are harming or beneficial. The focus will mainly fall on the effect of Facebook-speak on students' academic performance.

Social networking sites provide especially visible environments for the interaction between standard and non-standard writing. Facebook began as a university-based network and developed into a global platform where users write for friends, institutions, groups, and wider publics. Androutsopoulos (2015) describes such environments as sites of networked multilingualism, where linguistic choices are shaped by audience, identity, and social relationships.

Roelofse (2013) uses the term Facebook-speak for a developing written register characterized by features such as deliberately non-standard spelling, limited punctuation, abbreviations, and other typographic innovations. Pérez-Sabater (2013), examining comments on official university Facebook

pages, similarly found that Facebook writing displays informality, but also substantial stylistic variation, especially between native and non-native speakers. This suggests that Facebook-speak is not one fixed code; rather, it is a set of evolving conventions affected by user background, context, purpose, and audience.

Methodology:

1. **Research Design:** This paper employs a qualitative, literature-based analytical design. Unlike an experimental or survey study, it does not collect a new participant dataset. Instead, it reorganizes and synthesizes evidence from established work on the history of English spelling, CMC, social networking, digital orthography, and academic writing. This design is appropriate because the study asks interpretive questions about the form, function, and educational implications of digital spelling practices.
2. **Source Base:** The analysis draws on the sources already included in the original CMC and spelling paper. Historical discussion is based principally on Crystal (2012) and upward and Davidson (2011). The broader CMC framework draws on Crystal (2006), Thurlow et al. (2004), Squires (2016), and Androutsopoulos (2015). The analysis of social-network orthography and educational implications relies particularly on Roelofse (2013), Pérez-Sabater (2013), Heath (2018), and Lee (2014).
3. **Analytical Procedure:** The material was reorganized into four analytical themes: (1) historical sources of variation in English spelling; (2) recurring orthographic features of CMC; (3) Facebook-speak and the conventionalization of social-media writing; and (4) the relationship between digital writing and academic performance. Findings from the cited studies were compared across these themes to identify areas of agreement, tension, and educational relevance.
4. **Trustworthiness and Scope:** Interpretive claims were restricted to evidence already reported in the cited literature. Where studies point in different directions, both positive and negative interpretations are retained. For example, evidence of transfer from Facebook-speak into academic writing is considered alongside evidence that digital practices may support verbal ability, working memory, spelling, and new forms of literacy. This approach reduces the risk of treating social media as either wholly harmful or wholly beneficial.

Results:

1. Recurrent Orthographic Features in CMC:

The reviewed literature shows that digital writing differs from conventional edited prose in several recurring ways. These differences are not limited to spelling mistakes. They include strategies of compression, omission, repetition, visual emphasis, and symbolic substitution. The most frequently discussed features are summarized below.

Feature	Typical digital use	Communicative function
Abbreviations and acronyms	Shortened lexical forms and initialisms	Speed, brevity, shared-group efficiency
Non-standard spelling	Phonetic or deliberately altered forms	Economy, informality, identity, playfulness
Punctuation omission	Reduced commas, full stops, apostrophes, etc.	Rapid production and informal register
Punctuation repetition	Multiple! or? marks	Intensity, emphasis, stance
Unconventional capitalization	all caps or focused capitals	Prosody, focus, volume, emphasis
Reduplicated letters	Extended vowels or consonants	Lengthening, emphasis, affect
Emoticons / symbolic forms	Graphic substitutes for affective cues	Compensation for absent facial/paralinguistic signals
Hashtags	# + topic label	Topic marking, indexing, affiliation

Taken together, these features support the view that CMC orthography is shaped by both practical constraints and communicative needs. Some forms reduce typing effort; others restore expressive information normally carried by speech, facial expression, or gesture.

2. Evidence from Facebook-speak:

Roelofse's (2013) study provides concrete evidence of the forms students themselves report using on Facebook. In that study, 60% of learners reported excessive use of abbreviations and acronyms, 44% reported spelling errors or non-standard spellings, 42% reported absence of punctuation, and 33% reported over-punctuation. The writing exercise used in the study also showed shortened forms, letter-number substitutions, reduced capitalization, non-standard sentence forms, emoticons, and repeated

punctuation. These findings indicate that Facebook-speak has recognizable patterns rather than being a completely random collection of errors.

At the same time, Roelofse's evidence suggests that some digital features can appear in students' academic or school writing. The important point is that transfer is not necessarily caused by social media alone. The original discussion notes that limited English proficiency and weak awareness of genre boundaries may make it harder for learners to distinguish informal online conventions from formal academic expectations.

3. Formality, Native/Non-native Variation, and Conventionalization:

Pérez-Sabater's (2013) study of 300 comments on official university Facebook pages adds an important dimension. The analysis suggests that Facebook communication tends toward informality, but the genre is not fully conventionalized. Native and non-native users do not necessarily employ the same stylistic resources. Non-native writers may adopt a more formal style, particularly when addressing universities, possibly because formality is associated with linguistic correctness and academic legitimacy. This demonstrates that platform alone does not determine orthography; audience, proficiency, and communicative purpose also matter.

4. Capitalization as a Meaningful Resource:

Heath's (2018) findings reinforce the argument that non-standard orthography can be systematic. Capitalization in social media is not adequately explained as a simple emotional intensifier. All-capital forms can represent heightened prosodic features such as pitch, volume, or speed, while capitalization of a single word can mark informational or contrastive focus. Digital orthography therefore extends the functional range of written symbols in order to represent aspects of spoken interaction.

5. Social Media and Academic Performance:

The reviewed evidence does not support a simple claim that social media inevitably damages spelling. Roelofse (2013) reports that teachers and students perceived some negative transfer from Facebook-speak into academic writing, and the study's exercise documented examples of such transfer. However, the original paper also emphasizes that other variables must be considered, including learners' proficiency, their knowledge of academic conventions, and their ability to recognize register differences.

Lee (2014) examined Facebook use and texting among African American and Hispanic teenagers and identified non-linguistic concerns such as reduced study time or lower academic involvement in some contexts. At the same time, Lee also reported that longer-term Facebook users performed better than shorter-term users on measures including verbal ability, working memory, and spelling. The combined evidence therefore points to a complex relationship rather than a direct one-way effect.

Discussion:

The findings can be interpreted through two competing narratives. The first treats digital language as a threat to standards. From this perspective, abbreviations, missing punctuation, non-standard spelling, and unconventional capitalization normalize forms that may later appear in inappropriate contexts. Evidence from Roelofse (2013) shows that such transfer can occur, and teachers' concerns should not be dismissed when students have difficulty separating informal and formal registers.

The second narrative treats CMC as a site of linguistic adaptation. This interpretation is supported by the patterned and meaningful nature of digital orthography. Repeated letters and punctuation can encode intensity; capitalization can encode prosody and focus; emoticons compensate for absent facial cues; abbreviations respond to speed and brevity; and hashtags organize discourse and affiliation. These are not simply accidental mistakes but resources that users learn and deploy in context.

The historical development of English spelling strengthens the second interpretation without eliminating the first. English orthography has always changed through contact, technology, social convention, and competing norms. Printing, dictionaries, scribes, reformers, and national standards all reshaped spelling. Digital media represent another powerful technological and social environment in which written forms are being negotiated. The key educational issue is therefore not how to stop change, but how to help learners manage variation appropriately.

The most useful distinction is between competence in standard academic writing and competence in digital registers. A student may be highly skilled in one context and less skilled in another. Problems arise when the learner cannot recognize which conventions belong to which setting. This suggests that instruction should focus on register awareness, code-switching between digital and academic styles, proofreading, and explicit comparison of online and formal writing.

Conclusion and Recommendations:

Conclusion:

This study examined how social media and computer-mediated communication influence English spelling and orthography by reorganizing and synthesizing evidence from the existing literature. The analysis shows that CMC is associated with recurrent features including abbreviations, acronyms, non-

standard spellings, contracted forms, reduced or repeated punctuation, unconventional capitalization, emoticons, hashtags, and reduplicated letters. These features reflect both pressures for speed and brevity and the need to represent interpersonal meanings that ordinary text does not automatically convey.

The evidence also shows that the relationship between digital writing and spelling competence is not straightforward. Facebook-speak features may enter academic writing, particularly where learners have limited proficiency or weak awareness of register boundaries. Yet digital orthography can also be systematic, creative, and meaning-bearing. Social media should therefore not be treated as the sole cause of spelling difficulties, nor should non-standard digital forms automatically be equated with linguistic decline.

A balanced interpretation recognizes that standard spelling remains essential in academic and professional contexts while digital registers have their own conventions and communicative value. The educational goal should be to strengthen students' ability to move appropriately between these registers.

Recommendations:

- **Explicit Register Awareness:** Teachers should compare informal digital writing with formal academic writing and make the differences in spelling, punctuation, capitalization, and tone visible to learners.
- **Digital-to-Academic Editing Tasks:** Students can be asked to transform social-media-style messages into standard academic prose, encouraging deliberate control rather than simple prohibition.
- **Contextualized Spelling Instruction:** Spelling should be taught as part of broader writing competence, including audience, purpose, genre, proofreading, and word history.
- **Critical Digital Literacy:** Learners should examine why users employ abbreviations, repeated punctuation, capitalization, emoticons, and other non-standard forms, so that these features are understood as context-sensitive choices.
- **Avoiding Single-Cause Explanations:** Teachers and researchers should avoid attributing weak academic spelling exclusively to social media. Proficiency level, educational background, reading habits, genre knowledge, and writing practice should also be considered.
- **Further Empirical Research:** Future studies should compare students' social-media writing and academic writing directly, preferably across age groups, proficiency levels, platforms, and first-language backgrounds.

References:

1. Androutsopoulos, J. (2015). Networked multilingualism: Some language practices on Facebook and their implications. *International Journal of Bilingualism*, 19(2), 185–205.
2. Crystal, D. (2006). *Language and the Internet* (2nd ed.). Cambridge University Press.
3. Crystal, D. (2012). *Spell It Out: The Singular Story of English Spelling*. Profile Books.
4. Heath, M. (2018). Orthography in social media: Pragmatic and prosodic interpretations of caps lock. *Proceedings of the Linguistic Society of America*, 3, 55:1–13.
5. Lee, E. B. (2014). Facebook use and texting among African American and Hispanic teenagers: An implication for academic performance. *Journal of Black Studies*, 45(2), 83–101.
6. Pérez-Sabater, C. (2013). The linguistics of social networking: A study of writing conventions on Facebook. *Linguistik Online*, 56(6). <https://doi.org/10.13092/lo.56.257>
7. Roelofse, L. (2013). Investigating the impact of Facebook-speak on the written academic work of learners in a Western Cape high school (MA thesis). Stellenbosch University.
8. Squires, L. (2016). *English in Computer-Mediated Communication: Variation, Representation, and Change*. De Gruyter.
9. Thurlow, C., Lengel, L., & Tomic, A. (2004). *Computer Mediated Communication: Social Interaction and the Internet*. Sage.
10. Upward, C., & Davidson, G. (2011). *The History of English Spelling*. Wiley-Blackwell.