

**The Consequences of Social Media Use on the Orthography of
Young Native Speakers of Modern Greek**

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Abstract

Today, an increasing number of people are continuously occupied with mobile devices in their hands, totally focused on the use of social media. This research aims to explore the participation in social media networks and chatting applications as well as the spelling performance of teenagers (13-19 years old) and young adults (20-30 years old). The relevance of this research is that previous studies have studied the impact of social media use on literacy with languages based on Latin script. The focus of the present study is on Greek, a language with a script originating in Phoenicia. The study seeks to explore the effect of social media use, identifying specific social media network sites and chat applications chosen by the participants, as well as how much time they spend on these platforms. This study also seeks to determine participants' perceptions about and usage of the hybrid language of Greeklish—a combination of Greek and English—in digital communication. This study contains a self-report of participants' language competency in the Greek language and the effects of social media usage and Greeklish on participants' orthography skills. The study employs the use of questionnaires to extract information about participants' social media usage as well as to measure spelling skills via two spelling tasks in Greek. Participants were divided into two groups, defined by age: Group 1 included teenagers, and Group 2 included young adults. The findings revealed that young adults scored higher than teenagers on spelling tasks, and these young adults tend to participate less in or have a more negative attitude toward social media than teenagers. Another crucial finding is that participants who spend more time on social networking sites reveal a lower performance on the spelling tasks. Moreover, increased social media participation correlates with an increased usage of or a positive attitude toward Greeklish. The initial research question was partly confirmed, since age and the use of social media platforms, but not Greeklish, affected spelling skills. The contribution of this study is of interest to Greek society and language institutes and will be novel for languages based on different scripts than Latin.

Key words: computed-mediated communication (CMC), social media, social networking, spelling, orthography, Greek language, Greeklish

1. Introduction

In the context of globalization and the expansion of the Internet, nowadays the use of social media appears to be as popular as face-to-face interpersonal discourse and its usage has dramatically increased the last decades. Social networking sites play a crucial role in human communication now: users even tend to overshare their news and post updates very often. The accelerated speed of transmitting news is one of the primary characteristics of social media usage (Fahad, 2017).

It seems that youngsters are the most avid users of this new type of digital communication, since they spend the most of their leisure time on social networking (Siddiqui & Shingh, 2016). According to O' Keefe and Clarke- Pearson (2011), this happens because children and teens have a "limited capacity for self-regulation and susceptibility to peer pressure" (pp. 800-801). Despite the risks which may arise due to social media use, such as cyberbullying, depression, sexting, influence of advertisements on purchasing more products than they really need (O' Keefe & Clarke- Pearson, 2011), an impact on writing and spelling skills is another problematic possible consequence of social media use, especially when we refer to languages which are less spoken and widespread in the global spotlight (Koutsogiannis, 2012), such as the Greek language.

The main issue started when electronic software was developed that supported mostly the Latin script and, therefore, the digital language was English. As Koutsogiannis (2012) claims, this issue should have been resolved by 2000, when the international standard Unicode inserted the support of Greek writing in most software. However, the Latin script is still widely used in the production of typed language in Greek social media messages.

More specifically, this study aims to investigate the impact of the massive daily use of social media on the language skills, particularly the spelling skills, of young native Greek speakers. Consequently, the researcher will try to find out to what extent this phenomenon affects Greek speakers' language writing skills, as may be attested by the use of Greeklish or alphanumerical production of the Greek script on a spelling task. Finally, it will be examined if globalization and digitalization play a significant role, or not, in this phenomenon: this would mean the degradation of the 'correct' and authentic Greek spelling and, ultimately, the replacement with unconventional orthographies or spelling variants in the Greek orthography.

1.1. Computer-Mediated Communication (CMC)

In order to examine the research question, first the researcher will define what digital communication in modern times is. Generally speaking, it is referred to with the term Computer-Mediated Communication (CMC). To ensure each component of CMC is thoroughly represented, a well-rounded image of digital communication will be built.

First of all, the term 'communication' refers to any communication form that consists of a sender who sends a message to a receiver. According to Thurlow et al. (2004), this is called 'information-processing' in the digital and computer realm. However, the message is not constituted by solely a word-text message, but also by the context of the typed message. Communication is transactional since an interlocutor exchanges their messages with other interlocutors. The communication between them seems to have the form of a negotiation and transaction (Thurlow et al. 2004). Individuals become competent in communication once they have had proper and sufficient interaction and communication with others (Segrin & Flora, 2000). In order for a mode of computer-mediated communication to be achieved, a continuous

communication feed is required between a producer and a receiver. Both producer and receiver will ideally have a physical distance in their communication, and these two are the composers or the readers of the digitalized messages or even the speakers and the listeners accordingly once we refer to video conferences. The abovementioned theory belongs to Baron (1984), who attempted to give detailed information about and familiarize the general public with computer-mediated communication by introducing 'communication' during the very early stages of telecommunication. Additionally, as Thurlow et al. (2004) mention, CMC has its roots in the period of World War II, when electronic digital devices, the first computers, were invented. This period also records the first appearance and use of messages that were recorded electronically.

At this point it should be mentioned and clarified that electronic communication consists of two distinct categories. The first is called a synchronous type of communication, and it engages real time communication among interlocutors (Simpson, 2002, Romiszowski & Mason, 1996). In terms of computer-mediated communication, this can be translated to "text-based online chats, [and] computer, audio and video conferencing" (Simpson, 2002, p. 414). The second category involves an asynchronous communication type, which means the participants do not have to be present online concurrently (Simpson, 2002). This is called offline communication, and it is characterized by the time between sending a text message and when a receiver reads it (Romiszowski & Mason, 1996). Types of offline asynchronous communications are e-mails, discussion forums, and mailing lists (Simpson, 2002, p. 414).

Regarding the term 'mediated', CMC involves "any form of communication mediated by digital technology", as stated by Holmes (2009, p. 2) in *Encyclopedia of Communication Theory*. This describes namely e-mails, chat rooms, and social media (e.g. Facebook, WhatsApp, Skype, Instagram, Snapchat, Viber, iMessage, Mi Message, Google+, Twitter, LinkedIn, etc.). Social networking requires the use of a personal computer or a mobile device (smartphone or tablet), since communication technologies are moving beyond the standard use of personal computers (Herring et al., 2013) to being used on any device with an Internet connection, which is easily feasible in our modern digitalized days. Additionally, Verheijen (2015) indicates that not only personal computers, but also smartphones and tablets are absolutely necessary in order for computer-mediated communication to be achieved. To conclude, according to Spitzberg (2006, p. 630) the term of CMC refers to "any human symbolic text-based interaction conducted or facilitated through digitally-based technologies".

When making reference to the term 'computer', one ought to not only have in mind the electronic device of a computer, but also all other recent novel electronic devices, such as tablets and cell (smart) phones. The term 'computer' also incorporates the following technology, such as "teleconferencing, web cameras and voice recognition" (Thurlow et al. 2004, pp. 19-20). Computers can apply to generally any category of modern technological features which lead to the computerization of the face-to-face (FtF) communication (Thurlow et al. 2004).

Dresner and Barak (2006) went a step forward on CMC activities and they attempted to investigate the effectiveness of the practice of 'conversational multitasking'. This feature of synchronous textual CMC refers to the user's capability to participate and follow various textual conversations and activities simultaneously. The authors defined the action of conversational multitasking as when a web interlocutor concomitantly receives a vast number of conversational messages, "either within the same text window, or in different windows" (Dresner and Barak, 2006, p. 71). The authors studied to what extent an interlocutor is capable of managing to react,

follow, and reciprocate messages efficiently. Dresner and Barak based their novel technological term on theories that consider communication to be interpersonal. In terms of the multidimensionality of FtF conversation and communication, as it was initially presented in Burgoon (1994), and the interlocutors had to be active in several different channels of communication but not take part in them simultaneously.

On the other side of this theory, Baron (2005) indicates and assures based on the findings of previous research that individuals are physically capable of typing in one cyber conversation at a time, though they are considered to be multitasking since they are engaged in divergent activities simultaneously. These activities could be listening to music, working on assignments, eating entire meals or snacks, surfing the Internet, dealing with numerous instant messages in online discussions or even conducting face-to-face conversations with people present in their environment.

In order to make use of any kind of CMC, one should be able to at least understand how to utilize a computer (Childers, 2003), and, therefore, all of the other modern CMC media. According to data retrieved from 2004–2005, Bubas (2003) and Spitzberg (2006) denoted that the most popular online interactions in the USA fell within e-mails (93%), instant messaging (47%) and any other kind of online chat or discourse (25%). However, these numbers and percentages are distributed completely differently nowadays, with Asia (50%), Europe (16%) and Africa (11.5%) positioning on the first three places of the worldwide ranking (Internet World Stats, 2020). Therefore, with such as tremendous numbers in frequency, the users should at least attain the ability of using a computer in order to, first and foremost, accomplish something effective with it, become familiar with this digitalized environment (Childers, 2003) and following up on it to utilize social media and Computer-Mediated Communication.

1.2. CMC and sociolinguistics

Many debates have arisen regarding CMC and language use on social media. Herring et al. (2013) and Crystal (2001) claimed that the language used in the digital world seems to lack the context and structure of actual spoken and written language. Electronic messages are usually limited in context and in language set. As a result, users make use of abbreviations, emoticons, repetitions, hybrid mixtures of written and spoken language, and unconventional spellings. According to Herring et al. (2013) and Crystal (2001), this might lead to the degradation in the linguistic use of a spoken language, and as a result paralinguistic and nonverbal registers (emoticons, unconventional spellings, abbreviations, etc.) take the place of traditional norms of a written language. Furthermore, online interlocutors seem to transfer the oral features and strategies of a language into this new kind of digital conversations. Thurlow (2007) describes this kind of ‘deficient’ language in context, grammar and structure, as a nonstandard register, since he has the notion that digital writing downgrades the standard grammatical and literacy of a language.

Many experts point out that one of the causes for deviations from standard language norms is the synchronicity of much CMC. Firstly, in order for synchronous communication to take place, two or more CMC users have to be actively online at the same time. In terms of reaction, synchronous communication is instant and requires the users to be fast and rapid in their feedback. As a consequence of the interaction speed in instant messaging, the communicators usually transfer the techniques of oral discourse in the written instant messaging and sometimes replace words with graphic-based substitutions. In asynchronous digital communication (e.g. e-mails and SMS),

the simultaneous presence of the communicators is not required for communication to be achieved (Crystal, 2001). These digitalized linguistic alterations and phenomena lead to the mediation of a language. In terms of the technological realm, the linguistic deviations online focus on the acquisition of linguistic signs and facilitated production in Androutsopoulos (2011).

All the linguistic changes from verbal communication to a digitalized written form communication are included under the term of 'sociolinguistics'. As Androutsopoulos (2016, p. 282) denotes, sociolinguistics is the "socially meaningful linguistic differentiation, beyond the domain of spoken language in face-to-face interaction". According to his theory, sociolinguistics divides into two diverging, but connected to each other, categories. The first includes the ascent of a "digitally mediated language" (p. 282) utilized by an enormous number of citizens as a novel type of daily language. The second branch refers to an area of "mediatized representation", using and placing the contextualization "of the linguistic fragments" (p. 282).

Androutsopoulos (2014) supports the fact that it is reasonable for diverse and various linguistic resources to be present during cyber communication. The use of a plethora of linguistic variety, "beyond [social media user's] own linguistic repertoire" (p. 63) is evident among the cyber interlocutors because they are able to communicate rapidly and easily through social media sites globally to interact with each other. Hence, many of the communicative exchanges are carried out beyond the linguistic abilities of each individual. In his study, Androutsopoulos (2014) proposes that since social media users utilize different languages, then, as a result, they will understand and comprehend the messages, the words and the notions according to their own culture. For instance, for a German online user the contributions of Chinese users are not directly obvious online, and the same goes for a Greek user when communicating with a German one (Androutsopoulos, 2014) because there is lack of comprehension of each other's cultural and linguistic diversities. As Androutsopoulos (2014, p. 63) explains, the discourse of a heterogeneous linguistic social network and the different language clusters of participants causes a perpetual issue "of addressing this audience in terms of content and linguistic form". Furthermore, studies have shown that the average adult is likely to obtain personal accounts on more than one social network site, thus several members "synchronize certain kinds of content across different sites" (Buck, 2012, p. 11). Hence, this phenomenon suggests the pluralization of divergent linguistic features.

Bodomo (2009) discusses the language change and variation in CMC. He demonstrates various language adjustments in the new technological, electronic and digital environments, and he promotes the new practices of the language under these circumstances. More specifically, Bodomo discusses the changes of the linguistic form and usage, the alteration of the presented forms and uses, and finally the gradual appearance of innovative language forms. These new modifications seem to be universal and used both by teenagers and adults during digital discourse.

Ever since the breakthrough of the Internet, globalization has risen. Some might assume that enabling people to get closer to or become more familiar with different cultures, traditions and languages would be the main characteristic of the World Wide Web. Although there are many different languages spoken locally in certain regions of the world, a large number of these languages are not present on the Internet. Nonetheless, these languages' online informal usage is thriving through the use of code-switching with English words accordingly.

The reason why some languages are less represented than others on the Internet, and in the digitalized world in general, lies in the dominance of the English language as an online lingua franca. Bodomo (2009) outlines several specific reasons for

English's dominance. First, the use of the World Wide Web began and blossomed in the USA, and as a consequence, English was adopted as the online language. Furthermore, the English language has a tremendous number of native speakers as well as many second language speakers around world, making it an ideal language for international communication that promotes the exchange of information globally.

Serious character input and encoding problems caused struggles for the use of other languages online, while English has remained the number one language prevailing online. This issue occurred mainly with languages that do not use an alphabetical writing system (Bodomo, 2009). Therefore, the Unicode system was created to eliminate the vast language obstacles in the digital realm and make the Internet more user-friendly worldwide. This was done by developing codes compatible with most languages.

1.3. CMC language and literacy

The Internet has become ubiquitous and cost-effective in modern times. Increasingly, the Internet has enabled more voices to gain attention through its offering possibilities for self-expression and being heard (Joint, 2005), not only in chat forums but also on personal blogging web sites. Digital communication technologies, namely applications for web chatting, combined with the growth and development of computer-mediated communication has totally changed the way that people communicate on a daily basis (Verheijen, 2018), since people from all ages, races, countries, cultures, political parties and socio-economical statuses have the right to own accounts on social networking sites.

Since CMC has permeated into our everyday lives, the term 'literacy' has consequently become completely altered. Literacy traditionally includes three different skills: orthography (which is the primary focus of the present study), meaning and context. In terms of digitalized communication and expression, literacy is comprised of "digital, electronic and visual forms" (Koltay, 2011, p. 214). According to Watt (2010), literacy represents the coded written form of a spoken language. Letters and sounds of a language suggest the written representation form (orthography) and with the combination of phonemes they create new words. Language users correlate meanings with words (semantic skills), and manage context and other written language signals, such as punctuation and grammar (pragmatic skills), in order to successfully access and comprehend a written language (Watt, 2010). A literate person owes to having knowledge and complying with the analogous orthographic rules and standard language of each nation accordingly, in order for literate users to be distinguished from the illiterate ones because spelling plays a crucial role today (Xydopoulos et al., 2019).

In Verheijen's research about the impact of textese on the traditional literacy of youths, she states that their particular skills have moved beyond "traditional literacy skills" (2018, p. 115). The daily informal language, as it is nowadays known and shaped, inhabits another dimension and is thriving in a new digitalized realm. In modern days, this form of everyday language involving impromptu and informal cyber writing techniques is being transmitted through computer keyboards and screens, and it is being used by almost everyone on a global scale for all sorts of communication purposes (Androutsopoulos, 2016). Thus, all the current skills, methods and strategies of CMC literacy should be rapidly adapted to the digitalized information world (Verheijen, 2018). According to Ferguson (1983), when humans are involved in social groups, they evolve common various norms of a language under specific and divergent

circumstances and as a result, they are able to adapt, alternate and transform these norms accordingly.

Regarding CMC, by ‘conventional literacy skills’ the researcher of the present study mainly refers to writing and reading, since they are the primary means of communication utilized on social media. Writing skills are the production of a language in written form, and reading is the comprehension of the written language (Verheijen, 2018). Writing is characterized as permanent and static. It has a time lag, which implies that the writer has had the time to arrange, to modify and recast the context of the written message according to the needs of the receiver. In terms of CMC, the receiver is the reader of the incoming text message (Watt, 2010). More specifically, as Watt (2010) emphasizes, written sentences are more delicately structured and well organized than speech and even in computer-mediated communication utilize punctuation, apart from traditional writing on paper. Nevertheless, interlocutors usually adjust the writing rules and reform their written expressions according to the needs of the computer-mediated communication. Therefore, they employ capitalization or letter spacing, and adapt and alter non-verbal cues or gestures to the relevant written message (Watt, 2010). In this practice, literacy accommodates alterations according to new technology communication demands and new features of language are created, such as cyber language, e-language, and text or chat speak (Barton & Lee, 2013). Ferrara et al. (1991, p. 10) emphasized that these language alterations occur naturally in the online register, maybe due to a different form of register that offers brevity during online communication circumstances, and that is to say the modern term of ‘textese’ (further analysis follows in the next chapter) and secondly “it is a hybrid language variety” both of spoken and written form of the language.

Crosske (2008), on her review about Withrow’s work *Literacy in the digital age: reading, writing, viewing, and computing*, supports that in order for a student or young adult to be creative, productive and competent within a language they must know a wide range of advanced vocabulary. A proficient language learner with advanced vocabulary is quite competent in the reading and writing skills of a target language. Withrow further emphasizes that youth and the general population have been affected by the extensive use of technology tools and, as a result, they have acquainted and expanded their vocabulary with technological terms. Additionally, experienced and proficient language users are capable of creating new vocabulary and language, given that the situation arises (Ferrara et al., 1991). However, Withrow highlights that it is discernibly the parents’ responsibility to protect their children from ‘harmful’ newly formed technology related vocabulary, so that the young person preserves their authenticity in their conventional language use.

Through the extensive use of social media, and the Internet in general, novel terms have been created, namely ‘computer literacy’. Computer literacy describes an ability of users to find and handle received information in computerized form (Bawden, 2008). The concept includes the notion that an individual is “able to operate commonly used software packages effectively” (Bawden, 2008, p. 21).

Childers (2003) argues that individuals ought to attain at least the primary knowledge of how to appropriately use a computer and this is ‘information literacy’. In terms of computer and information literacy, computer users should be computer-literate. Particularly, he claims that a computer-literate person is one who shows a proficient level on a computer task. Finally, Childers (2003, p. 102) emphasizes that literacy is the “understanding and ability to adapt and increase that understanding” of technological knowledge and that is to say they should show a specific level of

knowledge how digital media are constructed and, lastly, be aware of the basic fundamentals of the interactive communication (Buckingham, 2008).

Therefore, under these circumstances people ought to attain a certain knowledge and competence of CMC that will enable them to be more motivated and flexible. The more highly motivated for CMC the individuals are, the more knowledge they attain, and this is for Spitzberg (2006) computer literacy. Concerning CMC knowledge, Spitzberg (2006) defines rules, concepts, methods and topics of communication. He also points out the notion that the CMC user comprehends suitable content (jokes or professional discourses), which should be applied each time for communication reasons. Spitzberg names the first condition content knowledge, because it states the ‘what’ of communication, like topics, rules and concepts. A latter stage is procedural knowledge, which refers to the ‘how’ in communication circumstances, “how content knowledge could be applied” (p. 640).

Based on the aforementioned information, scholars have observed that with the rise of computer-mediated communication and the general proliferation of computers in people’s lives, a change in conventional language has occurred. Linguists have recognized that people utilize computers as media to facilitate writing and speaking (Baron, 1984). Nevertheless, people adopt and adapt the modern technological novelties in various ways in their life according to their basic needs, therefore the same applies for their daily linguistic needs as well as in CMC (Barton & Lee, 2013).

As a result of the new digitalized world, the creation of language competency in computer-based environments has occurred, so-called computer literacy. Through a computer keyboard, an artificial language transmits the natural language and replaces the traditional face-to-face communication and conventional ways of written communication (Baron, 1984). Based on the article *Computer Mediated Communication as a Force in Language Change* (1984), Baron claims that a transformation happened not only with the arrival of computers, but a phenomenon also started with the invention and the daily use of the telephone. For instance, she states that with the use of the telephone, a device that almost has a general equal function to a computer, a “steady decline of face-to-face communication” (p. 122) was observed. For Watt (2010), the decrease of face-to-face interaction raises concerns about future communication, because its decrease may lead to a loss of nonverbal and contextual language features. Since the interlocutors distance themselves from each other in CMC, it is not their priority to notice their conversational presentations or misrepresentations. These are special features of the human speech on telecommunications. These features can also be noticed in the written form of computer-mediated communication. As CMC practices include briefness and spontaneity (because discussion topics are not planned beforehand), the interlocutors mostly deal with a single discussion topic. Particularly, CMC creates a distanced conversation that is typed through a computer keyboard and read on a computer screen. By disregarding FtF communication, the interlocutors are given a restricted right for expressing themselves and their opinions (Baron, 1984). CMC practices demand briefness, as it has been already claimed previously. Hence, the interlocutors might need extra time to reach an agreement (Baron, 1984), since they might be not easily understood in a computer-mediated conversation and need to express themselves over and over.

1.4. Features of computer literacy

Network communication requires special language because it utilizes the written reflection of oral speech (Yus, 2011). Computer-mediated conversations involve

contextualization tools and devices that are not normally available or feasible in the FtF communication (Mortesen et al., 2017). This means that network interlocutors should comply with the online communication regulations. The main goal under these circumstances of communication is not only to save time, but also to save any gestures used during an authentic face-to-face communication (Dorbane & Djaileb, 2018), like waving hands, smiling, laughing, crying or any other gestures and facial expressions used by the interlocutors to express their own feelings. The linguistic variation of CMC orthography implies toleration towards to any typographic mistakes incurred by the rapid creation of the messages (Androutsopoulos, 2011). Therefore, users usually tend to make orthographic mistakes in conversations written on social media (Yus, 2011) and other members show tolerance towards the orthographic deviations (Segerstad, 2002). According to Dorbane and Djaileb (2018), most of the networking media demand a limited number of written characters, typically around 160 characters (De Jonge & Kemp, 2012). Silva (2011) shares as well as the similar notion that web chat discourse occurs in actual time and rapid feedback is the prerequisite, thus individuals should adjust their linguistic written options.

Consequently, users should write short sentences in order to profit from the speed of communication in order for their texts to be sent immediately after their receipt. The main characteristics of commonplace cyber language, as presented by Androutsopoulos (2011, p. 145), are the improvised and the impromptu nature of cyber writing, and that “it is interpersonal, and relation-ship focused rather than subject oriented”. Moreover, the digitalized form of writing does not receive any kind professional proofreading or control, and it meets no special needs of education. Finally, its primary feature is its conversational and interaction type which follows a constant exchange of cyber discourse.

The linguistic needs of CMC have led to the creation of a novel type of literacy, that is computer literacy, and it has consequently led to the creation and innovation of unique and unusual types of language in writing. Silva (2011, p. 144) suggests that there are two types of writing styles. One style is named morphographic, and it provides a correlation between graphemes and morphemes. In this style, “each phoneme of a language is systematically represented by a unique symbol or a unique combination of symbols”. Hence, these writing system types indicate morphological correlations between words. The other category of the writing systems is the phonographic style. According to Silva (2011, p. 144), it is based on “syllabaries, alphabetic and consonantal scripts. In syllabaries, each character stands for a syllable”.

As a result of the extended use of computer literacy, online interlocutors attempt to re-create and fit their digital discourse to their spoken language. They attempt to include expressive characteristics of oral speech to represent elements such as emphasis, rhythm or intonation (Silva, 2011). In addition to these new networking writing styles, cyber language includes an extra type of computer literacy: textese. Language alterations, when transliterated through the written computer-mediated communication, involve alterations of nonstandard grammar rules. Features like those of typography, orthography, syntax and morphology of a language are taking over the sounds of a spoken language, and those language rules undergo various typing changes (Herring, 2012).

Textese contains any kind of non-standard spelling. This can include abbreviated vocabulary (Drouin, 2011) of any language presented online that makes words suitable to fit in a short text message. Scholars define non-standard spelling as when a word’s spelling deviates from its normative orthography, but nevertheless adheres to the “basic regulations of sound-letter association” of the language (Shaw, 2008, p. 42). De Jonge

and Kemp (2012, p. 50) suggest that textese should not be considered as a “consistent established spelling system”. Instead, there are several widely accepted and used common patterns regarding textese and textism. The subcategories of textese, as they have been presented by Drouin (2011), involve the following linguistic features, in other words textisms:

1. “the absence of capital letters at the beginning of the sentences”, (e.g. i want)
2. marginal usage of punctuation,
3. the practice of logograms. For example, *c* for ‘see’, *2* for ‘to’, *4* for ‘for’, *b* for ‘be’ (De Jonge & Kemp, 2012). With logograms individual letters or numbers replace the normal spelling of the words (Crystal, 2013),
4. “the absence of syntax”,
5. “the recording of the words according to phonological criteria only”.
6. initialisms of words which reduce words to only their initial letters (Crystal, 2013). For example, *lol* which stands for ‘laughing out loud’,
7. letter or number homophones (i.e. *gr8* for ‘great’, *m8* for ‘mate’, *l8r* instead of ‘later’) (De Jonge & Kemp, 2012),
8. “contractions or shortenings” omitting the most vital elements of the words (Crystal, 2013), (e.g. *cuz*, *coz*, *cause* or *bcs*, etc. for ‘because’; *gotta go*, *got 2 go*, *g2g* for ‘got to go’; *tmrw* instead of ‘tomorrow’; *xcellent* instead of ‘excellent’ (Drouin, 2011), (De Jonge & Kemp, 2012),
9. the use of emoticons instead of a word. For instance, users type often ☺ for ‘happy’, or ☹ for ‘sad’.

Crystal (2013) insists that textese has the strength to substitute speech practices and characteristics for communication intentions among teenagers. Darics (2013, p. 141) named these deviant spelling forms from the orthographic norm non-standard spelling, a term “used in text-based computer-mediated communication”. For Darics, the non-standard spelling corresponds to the written representation of non-verbal signals during face-to-face communication, which can be repetitions, complements, contradictions, showing emphasis or replacement of oral messages. In her study, Darics focused on the phenomenon of repeated letters in interactions between individuals on social media. Repetition is indicated by the constant repetition of a single letter in a word or even in punctuation. Several examples include the following cases, as presented by Darics’ (2013) survey, whose data was based on online text messages. The excerpts are from various online discourses.

1. ‘IIIIITTTTTTTTT’SSSSSS THE WEEEEEEKEND
BAAAAAAAAAAAAABBBBBYYYYYYYYYYY!!!!!!!’
2. ‘everything should take alllllllllllllllooooooooooooootttttt less time’
3. ‘hello, good morninggggg’
4. ‘cooooool’

Similar cases of profound repetition of the letters have been detected in other studies as well. The following excerpts belong to Androutopoulos and are from his study titled *Theorizing media, mediation and mediatization* (2016):

1. ‘ICH BIN TOOOOOOOOOOD!!!! DAS WAR SOOO WITZIG GESTERN
HAHAHAHA’
(I’m dead!!!! That was so funny yesterday hahahaha)
2. ‘LLEEEEECCCKKKKERRR !!!’ (Tasty !!!)

The study by Darics demonstrated that any kind of repetition denotes enthusiasm. It elicits “loudness or drawling” and “collegiality or friendliness” (p. 146). Repetition is a commonly used category of the non-standard spellings in online interactions among the interlocutors.

According to Crystal (2013), social media members usually opt for textisms due to the following reasons. Firstly, users feel more confident because they belong to a group with the same ‘common language’. Additionally, when interlocutors adopt textisms they experience a sense of privacy and a personalized way of communicating. This creates more prompt, explicit, and beneficial for communication purposes (Crystal, 2013).

De Jonge and Kemp (2012) indicate that it is quite ambiguous how cyber interlocutors decide which options of textism to make use of in their cyber communication. In particular, De Jonge and Kemp state that most of the users opt for predictive modes from mobile devices. These modes “predict the most likely word resulting from a particular combination of key presses” (De Jonge & Kemp, 2012, p. 50). The words on the mobile screen alternate after each keystroke, predicting plausible relevant words based on the letters used by the composer of the text. Next, the built-in dictionary proposes a small list of possible words from only normative written language, so the user has the opportunity to opt for the word they intended (Segerstad, 2002). The predictive method is also known as the autocorrect option of the keyboard, and it is a standard feature on any electronic mobile device which support text messaging. De Jonge and Kemp (2012) theorize that when individuals opt for the predictive method of typing, the option might help users avoid and reduce the use and creation of new textism forms. This method seems much faster than typing the appropriate vocabulary abbreviations during text messaging. However, cyber interlocutors might preserve the phenomenon of omitting punctuation or capital letters and apostrophes. Text users are led to this omission due to the fact that extra keystrokes are required. Thus, users prefer to discard these grammatical features in order to save time (De Jonge & Kemp, 2012).

Baron (2005) explains that such novelties in writing styles are usually obvious and widely used by adolescents. Nowadays, the youth group is able to adopt the rules of spoken language in order to express themselves in written form on social media (Baron, 2005). It is also indisputable that teenagers are very keen on “experimenting with a new linguistic medium” (Baron, 2005, p. 30). The most avid users of textese seem to be teenagers and young adults (Crystal, 2013). On the other hand, as Baron (2005) claims, it is hard to observe the adoption of the linguistic novelties by college students, since they normally avoid adopting vocabulary abbreviations.

Non-standard orthography represents creativity and expression of an interlocutor’s personality during online written interaction. The trend to manipulate orthographic norms features a loose type of writing and is the primary characteristic of cyber language. Previous researchers have emphasized that non-standard spelling occurred due to the limited free space for users when writing online, as well to shorten the reaction time. Through these methods, individuals also express their attempt to transfer the oral characteristics of communication into the written discourses of social media messaging (Darics, 2013). However, Mortesen et al. (2017) emphasize Androutsopoulos’s view that mediated writing style depends greatly upon the personal choice of each individual writer.

1.5. Social Media

With continuing web and digital developments, users are turning to a more immediate way of online interaction than simple emails (Childers, 2003). These various forms of text-only communication provide online interpersonal interaction and communication (Childers, 2003) and compose the world's dominant social media. Moreover, social media are capable of supporting audio, visual, and video file transmissions (Childers, 2003), allowing users to share their updates and news by posting texts, photos, videos, and music. In response, other users can like, share, or comment upon these posts.

People who use social networking sites share content and communicate with each other. These action and reaction procedures require interactivity. Social media networks and human participation are the prerequisites within CMC interaction (Holmes, 2009), which was mentioned and thoroughly analysed in the previous section.

Internet usage, primarily through social media, is an integral part of life today. A social network is “a set of semiotically materialised, interactive connections among human participants” (Androutsopoulos, 2014, p. 62). Moreover, according to Shabir et al. (2014), social networking is defined as any online platform, and its primary purpose is the discussion of current affairs by users. Androutsopoulos (2014) extended this definition by emphasising that social networking is a communication system that allows the establishment of social communication bonds among its registered members who possess tools for communicative interactions and representations. These technological tools comprise social media. Similarly, Shrestha described social networking as the media that allow users to connect through virtual communities and communicate by exchanging information and ideas (Shabir et al., 2014).

Social media are the current means of communication due to the peak of World Wide Web usage. According to Gurcan (2015), from 2005 onwards, the transformation of personal and social changes rapidly spread through the continued use and development of novel tools for communication. Moreover, Chukwuebuka explained that social media are “an Internet-based set of applications that constructs on the ideological and technological foundation of the web” (Shabir et al., 2014, p. 133). Gurcan (2015, p. 965) presented a more detailed definition of social media as a “component of Web 2.0, which permits users to be active creators and shares of online information, rather than simply absorbers of information”.

Social media networking activities occur on websites by individuals (‘users’) who gather a broad network of connections with other users (‘friends’). Registered users select one or more social network applications (i.e. Facebook, Instagram, Twitter, etc.) to display their personal social media profiles. The content of each user's profile to their friends is carefully constructed and then shared. This user-generated content includes posted videos, private photos, public photos from other sites, and personal thoughts and experiences. The overview page on each social media profile is called a ‘newsfeed’. Hence, an individual’s social network connections can comment on these uploaded materials on the others’ newsfeeds in public or communicate via private messaging (Androutsopoulos, 2014).

1.6. The landscape of computer-mediated communication

The characteristic features of social networking are text messaging as well as the sharing of audio, images, videos, and general media that connect the world directly at high speeds for no additional cost. To provide accurate social media and networking information in this study, the researcher adopted the model of CMC by Verheijen (2015) and adapted it to the research data from the survey conducted for this

dissertation. In her article, Verheijen (2015) thoroughly explained CMC and presented its categories and subcategories. The central category of online communication is text messaging or SMS (short message service). Moreover, CMC also includes online chat, the largest category and its two distinct subcategories: chat rooms and instant messaging, which also have subcategories. Emails, blogs, and online discussions are further features of CMC, and additional categories include visual media sharing (on platforms such as YouTube and Instagram) and social networking sites (such as Facebook, LinkedIn, and Google+). All CMC categories and their subdivisions appear in the following figure:

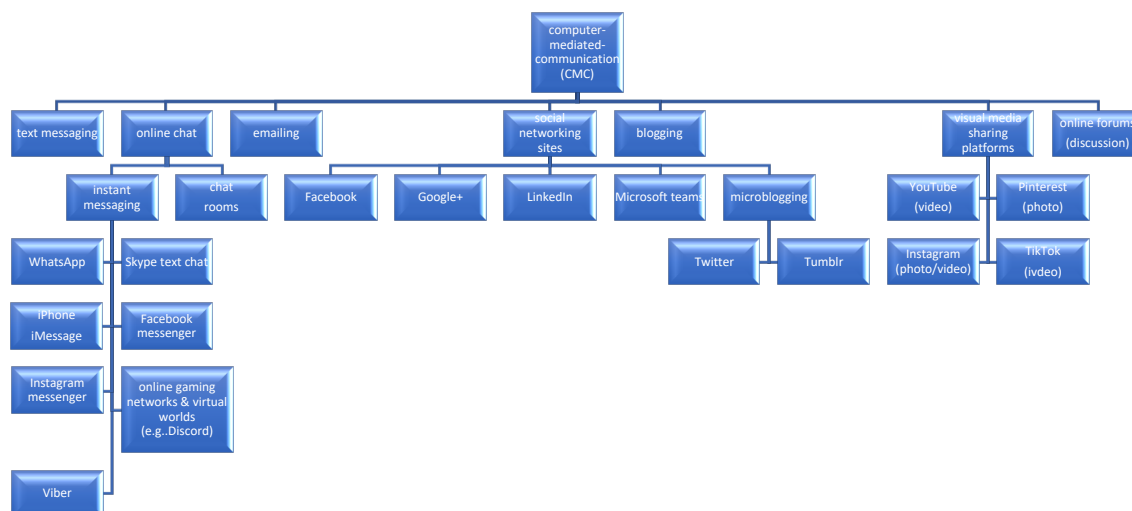


Figure 1. Classification of CMC as adopted by Verheijen (2015) and further adapted for this study.

The most popular social media websites among students worldwide appear below, as presented by Gurcan (2015):

- Twitter (a microblogging platform)
- Facebook, LinkedIn, and Instagram (social networking applications and sites)
- YouTube (a multimedia platform for videos and audios).

Most of these websites offer instant messaging as well. Moreover, Viber and WhatsApp are two of the leading instant messaging applications in the present decade (SimilarWeb, 2020) worldwide. Regarding Greece’s most popular communication applications, Viber and Facebook Messenger ranked on the third and fourth position accordingly, while WhatsApp is found on twelfth position (SimilarWeb, 2020).

1.7. Social media impact on youth

Digital media of all types, especially social media, are predominant in today's world (Crosske, 2008). Since the introduction of digital media, scholars have raised concerns about children's language evolution in light of social media and the impact of technological tools on literacy and communication skills (Watt, 2010).

Across the world, young people have quickly adapted to social media and Internet usage more than any other age group (Shabir et al., 2014). Social networking continues to flourish among youngsters as an inextricable part of communication in their social life (Dorbane & Djaileb, 2018). Young people may resort to social media use because of parents’ harsh restrictions about socialisation due to the fear of strangers.

Thus, youngsters have turned to social media to communicate with peers online (Shabir et al., 2014).

According to Withrow (Crosske, 2008), most youths minimise their education to focus on these convenient technological tools. According to the National Centre for Education Statistics (NCES), which retrieves data from the American Community Survey (ACS), in 2018, nearly 94% of children worldwide, aged 3 to 18 years, have home Internet access; 88% gain Internet access from personal computers while 6% have access to the Internet through smartphones.

Several prior major studies have indicated that technology, in general, causes severe consequences for children, including physical, social, and even mental harm, because of the reduction of human interaction, which could affect social, emotional, and verbal progress (Watt, 2010). Nevertheless, Baron (2005) suggested that the language competency of young people is still the responsibility of educators and parents.

Spitzberg (2006) provided several reviews of teenagers' beliefs and dispositions about the Internet. Teens on his study believed that the Internet alienates them from the real world and prevents their growth in crucial daily tasks. Moreover, these youngsters revealed that they spend more of their time on Internet tasks instead of communicating or spending time with their families. Finally, these youths also agreed that the Internet and social media do not promote real contact with peers and others.

Notably, young adults face similar challenges with social media usage. Therefore, this study examines the impact of social media use on both teenagers (aged 13 to 18 years) and young adults (aged 18 to 30 years). The age range of young adults in various studies ranges from 18 to 25 years old (Vaterlaus et al. 2015) or 18 to 29 years old, as representing the Millennial generation (Lenhart et al., 2010).

Studies have shown that young adults have opted for online communication and entertainment at the same rate as teenagers (93%) for the last two decades during the prevalence of the Internet (Lenhart et al., 2010). Buck (2012) indicated that young adults are the most eager users of social networking. The average young adult has more than one social media account and tends to synchronise digital content across various social networking sites (Buck, 2012; Lenhart et al., 2010).

Young adults tend to utilise the same social networking websites as youths, which are similar for 72% for all young adult users. Most (81%) opt for using wireless Internet on laptops or mobile devices (Lenhart et al., 2010). Thus, they appear to be connected to the Internet for every waking hour of the day, choosing online activities over physical and face-to-face interactions (Vaterlaus et al. 2015).

1.8. Digital Natives

The young people described above are known as 'digital natives', because they have been familiar with the digital environment and technology from a young age. According to Prensky (2001), these youths have been surrounded their entire lives with digital tools, such as computer and video games, digital music players, video cameras, and mobile phones. They spend at least ten to twenty hours per day using these digital devices. Prensky (2001) called these young people digital natives because these youngsters are 'native speakers' of the advanced digitalised era and its products (i.e. Internet and electronic devices). As Corrin et al. (2010) stated, the parents of digital natives will always be immigrants in a world where they will not be able to communicate, understand, approach, or utilise the same techniques as their children.

Further characteristics of digital natives are their capability of multitasking and mastering technology quickly. Digital natives are also dependent on technology and are addicted to a social media lifestyle, which leads to the desire for constant online connectivity, fast transmission of information, and flexibility to share personal information on the web (Corrin et al., 2010).

Nevertheless, contrary theories posit that people of all ages are capable of developing technical skills and becoming digital natives. These theories focus on individuals' technological experience and their ability to adopt novel technologies at a rapid speed. Moreover, the findings of Corrin et al. (2010) indicated that not all students comply with the established criteria for digital natives, lacking the flexibility to access and utilise modern technology at all times. Corrin et al.'s (2010) study focused on students with notable academic ability and found that these students did not prefer to use technology during daily study.

2. Greeklish: the Greek transliteration system

One language that continues to face practical issues in digital messaging is Greek. Greek is the mother tongue of the researcher. Greek is a language with a complicated script and punctuation marks, which requires analogous keyboard function and computer software.

2.1. The Greek language and orthography

For Greek speakers, the standard forms of orthographic rules are integral in literacy (Xydopoulos et al., 2019). The rules of the Greek language are strict, and proper spelling and punctuation are compulsory and crucial for reading comprehension of simple instant messages (Tsourakis & Digalakis, 2007) in online communication. The Greek educational system bases its fundamentals on the national language, which creates a standard national language identity that is inextricably associated with the nation-state (Xydopoulos et al., 2019). The same notion applies to orthographic conventions. Hence, Greek society consists of a national language established on a national register of orthography enforced by its educational institutes (Xydopoulos et al., 2019).

Regarding Greek grammar rules, punctuation is critical, and according to Calfee (1985), spelling is a crucial axiom in the school curriculum. For example, the language has numerous punctuation symbols, such as full and double full stops, commas, question and exclamation marks, parentheses, suspension points, hyphens and double hyphens, and quotation marks (Triantafyllidis, 1976). Each of these has a specific function in written form. A second crucial function of Greek grammar, orthography, and language is intonation. All Greek words are followed by stress marks when written. Each Greek word of two or more syllables requires a stress mark (Triantafyllidis, 1976).

Finally, the Greek language complexly uses vowels and consonants. Seven different vowels exist (ο, ω, ι, η, υ, α, ε), and each has specific usage in Greek words. Consonants (β, γ, δ, ζ, θ, κ, λ, μ, ν, ξ, π, ρ, σ, τ, φ, χ, ψ) require particular utilisation as well. Moreover, these vowels and consonants combine to create unique diphthongs with exclusive spelling rules (Triantafyllidis, 1976).

2.2. Transcription

As previously stated, digital language activities depend on users' language traditions. Thus, informal digital written language relates to the spoken form (Androutsopoulos, 2016). Androutsopoulos (2016) identified specific occasions for two or more spelling variations in social network writing practices. He said that written articulations in the forms of another deviant language define the phenomenon of dual script for languages "written in the Latin script online" (p. 291), such as Greek speakers writing English words in Greek script and Turkish speakers writing German words with a Turkish spelling.

This use of dual script is known as 'transcription', which is the transfer of speech to the written form of the Latin script (About "Greeklish", 2013). It represents a tradition in which "conventionalised values attached to scripts" can be seen as spontaneous and unscripted "contextualisation signals in digital written language" (Androutsopoulos, 2016, p. 291). In contrast, the concept of 'transliteration' refers to the transcription of the written text in the Latin script (About "Greeklish", 2013).

In his theory of transcription, Androutsopoulos (2016) demonstrated that with the shrinkage of prosodic and visual language signals, the concept of contextualisation

in CMC uses technological tools, such as keyboards and mice, for encryption. Thus, various types of orthography and punctuation can achieve the natural prosody present in face-to-face communication.

2.3. Code-switching

An additional characteristic of the CMC writing variation is known as code-switching, by means of placing different “linguistic codes within a single sentence” or the change of different linguistic codes that do not obtain a pragmatic function (Androutsopoulos, 2010, p. 1). In computer-mediated discourse, code-switching can take place in informal or corporate oral interactions that are either synchronous (e.g. instant messaging and chatting) or asynchronous (e.g. emails or forums) interaction (Androutsopoulos, 2010).

This study focuses on synchronous communication with code-switching that follows specific patterns, such as “rapid transitions and relatively short turns” (Androutsopoulos, 2010, p. 8). The most well-known code-switching patterns follow, as presented by Androutsopoulos (2010):

1. switching for commonplace conversational purposes, such as greetings, farewells, and good wishes;
2. switching to achieve culturally unique genres, such as poetry and joke-telling;
3. switching to transmit reported speech;
4. switching with repeated utterances for emphatic purposes;
5. switching to accept prior language choices made by previous discourses or to challenge other interlocutors’ language knowledge and choices;
6. switching to contextualise a topic or perspective or to analyse information and divide fact from opinion;
7. switching to illustrate humour or severity as well as to mollify verbal threats;
8. switching to or from others' codes to indicate concession or disapproval.

For code-switching to be more concise, discrete, and clear, Androutsopoulos (2010) provided an excellent discourse about this writing variation:

“Excerpt from the Greek forum, *greex.net* (base language is Greek, German italicized).
edo iparxi pollous ellines apo tin makedonia epidis i *wirtschaftliche lage* tous den einai kali...palia i makedoni itane plousioi... efiaxnan gounes ktlp ala tora pige i *wirtschaft* me tis gounes *den bach runter*
[there are many greeks from macedonia here but their *financial situation* is not good... macedonians were rich in the past, they were trading with furs, but now the fur *business* is going *down the drain*.]”

This excerpt appears in Greek with transliteration to Greeklish while code-switching to German in three specific phrases (‘financial situation’, ‘business’, ‘going down the drain’). More specifically, the abovementioned discourse does not suggest any specific function or referential necessity. Androutsopoulos (2010) claimed that the writer of the text message opted for this deviant writing style out of habit or convenience. Moreover, regarding the last German phrase ‘den Bach runtergehen’, or ‘going down the drain’, the statement uses a German linguistic idiom allowing the composer of the message to express and describe “the Greek finite verb and the German idiomatic phrase” (p. 12).

Subject matter dealing with spelling and code-switching in CMC appears in another language without diverse spelling variability. This switch, from one language to another, usually occurs between the corresponding orthographies but without being a standard characteristic. Thus, the representation and depiction of one language in the orthography of another language might be a necessary tool. However, it also might be an unconscious choice by the writer wishing to exceed “normative orthography to create pragmatic meaning” (Androutsopoulos, 2010, p. 15).

Finally, Androutsopoulos (2013) claimed that code-switching in online writing provides more playful and creative linguistic discourse by taking advantage of flexibility with diverse cultural online discussions where language hybridity is applied. He also demonstrated that code-switching is a language activity that can relieve misunderstandings between written and spoken language, both publicly and privately.

2.4. Greeklish

The concept of Greeklish requires a precise definition and rules for usage. Greeklish is the transliteration of Greek words in Latin script (Tsourakis & Digalakis, 2007) and represents “the combination of the Greek and English languages” (Chalamandaris et al., 2006, p. 1226). Greeklish is a helpful language tool for students, scientists, and technologists – as Androutsopoulos claimed on his online article “From fragochiotika to Greeklish” (2008). As previously mentioned, English is the common language in online environments, regardless of the users’ first language. Nevertheless, users with a first language that consists of non-Latin script invented a way to transliterate their vernacular language with Latin script (Spilioti, 2014). Thus, for many native Greek speakers who wish to facilitate conversations both at home and abroad (Xydopoulos et al., 2019), Greeklish is a common way to write CMC, such as emails and instant messaging.

Xydopoulos et al. (2019) identified the tendency for Internet users to adopt foreign and global practices online, while still attempting to observe traditional practices in language formation, which is a hybrid approach to communication. In this way, Greeklish is not a language, but a hybrid—an alternative language useful for someone who opts to write in Greek with no specific need for using Greek by blending Greek and English words. In this manner, Greeklish is “Greek textual data with the Latin script” (Tzekou et al., 2007, p. 29).

The need to adopt Greeklish arrived when the first software systems could not support Greek characters. When users write in Greeklish, they are free to deviate from the orthography, the grammar, and the punctuation of the standard Greek language (Tsourakis & Digalakis, 2007; Xydopoulos et al., 2019). Thus, the Greek language is quite suitable for spelling variations. Because transliterating was never officially established, Greek users of technology developed a contemporary and idiosyncratic transliteration: Greeklish (Xydopoulos et al., 2019). Today, Greeklish embraces an informal written language that is particularly suited to digital texts (Xydopoulos et al., 2019). Greeklish eliminates the need to shift the keyboard from English to Greek, simplifying Greek language rules by omitting punctuation and complicated spellings, saving much time while contributing to concise CMC correspondence (Tsourakis & Digalakis, 2007).

Greeklish transliteration has three categories. According to Chalamandaris et al. (2006), the first category refers to sound analogy, presenting phonetic Greek in a written manner, such as when the Greek letter θ generates the consonants /th/ and the diphthong $\alpha\iota$ produces the vowel /e/. This category is known as “phonetic writing” and

allows for the “replacement of a grapheme for another one which would represent that sound in a particular context” (Silva, 2011, p. 145).

The second category focuses on similarities between the forms of Greek letters and the use of Latin letters, as some users employ the number 8 instead of the Greek letter θ and the Latin letter w for the Greek letter ω. This second category provides for alphanumerical and visual respelling of the script. The final category includes similarities in keyboard layout; therefore, letters on the English keyboard substitute for Greek letters because they are in the same location as letters on the Greek keyboard, such as using u instead of θ and c instead of ψ.

There are varied ways to transliterate words in Greeklish. For instance, the following question “καμία ερώτηση δεν έμεινε αναπάντητη” (‘no question was left unanswered’) transliterates in two possible ways: 1) *kamia erotisi den emine anapanititi*, and 2) *kamia erwthsh den emeine anapanthth* (Tzekou et al., 2007, p. 29). Tzekou et al. (2007) provided the following reasons for this binary choice. The first sentence is a phonetic transliteration where the writer aims to phonetically transfer the Greek words to the Latin script, without attending to the corresponding orthography. In contrast, the second example is an orthographic respelling, where the composer attempts to reproduce the Greek orthography in the Latin script analogically. While each writer has preferences, Greeklish allows writers to choose their own method (Androutsopoulos, 2008). The same pattern applies for words, such as “συζήτηση” (‘discussion’) which could be transcribed as “*sizitisi*” or “*syzitish*”. The same duality occurs with the word “χαρά” (‘joy’), which is written as either “*xara*” or “*chara*”.

For a more precise representation of Greeklish transliteration, its transcription system, and its relationship to the standard national Greek language and orthography, the researcher offers relevant examples in the following excerpts, by presenting examples of Greeklish writing as detected on social media discourses in previous literature and studies.

Excerpt 1, source: Koutsogiannis and Mitsikopoulou (2006):

“Greeklish: *Agapite kurie Koutsogianni,*

To megeðos tou arxeiou sto opoio αποθηκευονται τα minumata του ilektronikou sas taxudromeiou exei perasei to orio twñ 30000 Kb. Gia tin kaluteri leitourgia tou grammatokibwtiou sas, prepei na sbisete ta minumata tis ðuridas sas ston eðyupiretiti.

Greek: *Αγαπητέ κύριε Κουτσογιάννη,*

το μέγεθος του αρχείου στο οποίο αποθηκεύονται τα μηνύματα του ηλεκτρονικού σας ταχυδρομείου έχει περάσει το όριο των 30000 Kb. Για την καλύτερη λειτουργία του γραμματοκιβωτίου σας, πρέπει να σβήσετε τα μηνύματα της θυρίδας σας στον εξυπηρετητή.

English: *Dear Mister Koutsogiannis,*

Your mailbox size has exceeded the 30000 Kb limit. For the best operation of your mailbox, please delete some messages from the mail server.”

Excerpt 2, source: Androutsopoulos (2015):

“Greeklish: *matia mouuuuuuuuuuu...23 wres kai 45 leptaaaaaaa...:PPPP... k meta agaliesssss!!!!!!!!!!* 

Greek: *μάτια μου... 23 ώρες και 45 λεπτά.... και μετά αγκαλιές!*

English: *My beloved one, 23 hours and 45 minutes and then hugs!”*

Excerpt 3, source: Androutsopoulos (2014):

“Greeklish: *sas erxomaiiii seee 3 meroulesss agapouless mouuu* ♥♥
 Greek: *σας έρχομαι σε 3 μερούλες αγαπούλες μου!*
 English: *coming to you in 3 days my dearest ones!*”

Excerpt 4, source: Androutsopoulos (2014):

- “Greeklish: *6 meres k shmera...:/ angxos sto foull:/*
 Greek: *6 μέρες και σήμερα... :/ άγχος στο φουλ :/*
 English: *6 days to go . . .:/ stress to the limit:/*
- Greeklish: *4 meres k shmera. . .dn mporw allo...:/ ante n grapsoume n teleiwnoume. . .*
 Greek: *4 μέρες και σήμερα ... δεν μπορώ άλλο... :/ άντε να γράψουμε να τελειώνουμε...*
 English: *4 days to go . . . I can't study anymore...:/ let's get it over with. . .*
- Greeklish: *aurio arxizoun ta basana mou. . .axxxxx kai baxxxx!!!!*
 Greek: *άυριο αρχίζουν τα βάσανα μου...αχ και βαχ!*
 English: *tomorrow my torture begins. . . oi oi oi!*
- Greeklish: *Epitelous Teleiwsan ta vasana. . .;)*
 Greek: *Επιτέλους τελείωσαν τα βάσανα...*
 English: *Finally, the torture's over”*

2.5. Taxonomy of textisms

In order to figure out the spelling deviations in Greek teenagers’ and young adults’ computer-mediated communication, the following table depicts the most significant and commonly used textisms. In the first column of the taxonomy are placed the types of textisms and in the second column their definitions, as adopted by Verheijen (2018) on her relevant research about Dutch youths’ orthographic deviations. In the last two columns are presented the textisms in English and in Greek or Greeklish accordingly, and wherever applicable. I opted for both languages (English and Greek) in order for the given examples of textisms to be clearer to the reader, allowing them to proceed to the relevant comparisons or relations.

Table 1
*Textisms with deviations in letters and punctuation*¹

Type	Definition	English examples	Greek/ Greeklish examples
initialism	reduction of the words to their initial letters/ first letters of each word (Crystal, 2013)	<i>lol <laugh out loud</i>	<i>τεσπα , tespa < τέλος πάντων ('anyway')</i>
contraction or shortening	omitting the most vital elements (mostly vowels) of the words (Crystal, 2013) and dropping of ending of words	<i>cuz, coz, cause, bcs < because</i> <i>gotta go, got 2 go, g2g < got to go</i> <i>tmrw < tomorrow</i> <i>xcellent < excellent</i> (Drouin, 2011; De Jonge & Kemp, 2012)	<i>δλδ, dld < δηλαδή ('that is to say')</i> <i>μνμ, mnm < μήνυμα ('message')</i> <i>τλκ, tlk < τελικά ('in the end')</i> <i>κ, k < και ('and')</i> <i>υπολ, upol < υπολογιστής ('computer')</i> <i>δν, dn < δεν ('not')</i>

¹ Classification of textism as adopted by Verheijen (2018), and further adapted for this study.

			<i>τιπ, tpt</i> < τίποτα ('nothing')
absence of capital letters (Drouin, 2011)	omitting the capital letters of a word at the beginning of a new sentence or of proper names	<i>i want</i> < <i>I want</i>	<i>ναι αυτό σκέφτομαι κι εγώ, ναι αυτο σκεφτομαι κι egw</i> ² < <i>Ναι, αυτό αυτό σκέφτομαι κι εγώ</i> ('Yes I am thinking the same')
letter or number homophones	substitution of letter(s) of word by another letter(s) or number (s)	<i>gr8</i> < <i>great</i> <i>m8</i> < <i>mate</i> <i>l8r</i> < <i>later</i> (De Jonge & Kemp, 2012)	<i>2χρονο, 2χρονο</i> < <i>δίχρονο</i> ('two years old') <i>2μερο, 2μερο</i> < <i>διήμερο</i> ('two days')
logograms	replacement with individual letters or numbers instead of using the normal spelling of the words (Crystal, 2013)	<i>c</i> < <i>see</i> <i>2</i> < <i>to</i> <i>4</i> < <i>for</i> <i>b</i> < <i>be</i> (De Jonge & Kemp, 2012).	-
absence of syntax or displacement of words	-		<i>σχεδόν δέκατα θεωρείται αυτό < αυτό θεωρείται σχεδόν δέκατα</i> ('this is considered almost tenth', when talking about fever)
missing punctuation	omitting apostrophes, stress, question and exclamation marks, full stops, commas or even words	<i>wont</i> < <i>won't</i>	<i>Γι αυτό < γι' αυτό</i> ('for this reason') <i>Μπες και πάρε αν είναι σε πόση ώρα θα τελειώσεις < Μπες και πάρε με τηλέφωνο, αν είναι. Σε πόση ώρα θα τελειώσεις;</i> ('Log in and then call me. How long will it take you to finish?') <i>φλιτζάνι μπρικι καφες νερο κατσαρολα μακαρονια με κιμα και σφουγγαρι < φλιτζάνι, μπρίκι, καφές, νερό, κατσαρόλα, μακαρόνια με κιμά και σφουγγάρι.</i> ('cup, coffee pot, coffee, water, pan, pasta with minced meat and sponge')
extra capitalization	-	<i>IT'S SO COLD</i> < <i>it's so cold</i>	<i>AXAXAXAXA < αχαχαχαχα</i> ('haha')
reduplication of punctuation or letters	-	<i>!!!!!!! < !</i> <i>????? < ?</i>	<i>!!!!!!! < !</i> <i>;;;;;;; < ;</i> <i>λεπταaaaaaaaa < λεπτά</i> ('minutes') <i>agaliessssss < αγκαλιές</i> ('hugs') <i>Αααχ θεεεε μου! < αχ, θεε μου!</i> ('oh my God!')

² Testimonials retrieved from my personal online discourses, as the sender of the messages.

3. Literature review

A large number of prior studies have been conducted regarding how English and other languages interact online or to what extent CMC users deviate from their own standard languages (focusing mostly on the ones with non-Latin script) and using English or mixed scripts instead. The results vary considerably, and, in this section, the researcher focuses mainly on the influence of the cyber language on participants' spelling skills.

To begin with, Warschauer et al. (2002) examined the English and Arabic language on online communication among young professionals in Egypt. For the results, the researchers based their survey on linguistics analysis, on questionnaires and interviews. The survey revealed that the use of English is traditionally found in the composition of formal e-mails (92.5%), while Arabic is more commonly used on online chats and informal e-mails. The most interesting finding was the usage of a mixed language (English-Arabic) both in informal e-mail communication (52.4%) and in online chatting (58.7%). These outcomes indicate that English is prevalent at the expense of the vernacular language. Warschauer et al. noticed that the dominance of English on online communication was based on divergent reasons. The researchers concluded that this might have occurred due to the lack of Arabic software standards, although the ASCII³ code supports unmodified Roman registers. Additionally, the participants affirmed that they first learned to use the digital environments in English and not in Arabic, which is their mother tongue. Last but not least, the participants unveiled that they opt for the English language usage due to the great demand "for an international lingua franca", since English is considered to be the international and global language.

Another study, conducted by Yousaf and Ahmed (2013) among university students in Pakistan, reported that the higher the exposure to online communication, the more negative effects on their writing skills in English. The aim of the study was to reveal the impact of the extended use of SMS on the English writing skills of university students. The survey was conducted through questionnaires and it was concluded that most of the students (88%) write in a mixed language of English and Urdu during their online communication. As a result, writing problems were detected particularly in students' spelling skills. The participants also admitted that they mainly used word abbreviations, and this leads to writing difficulties during their English written university examinations, where the formal use of the language is required.

Aziz et al. (2013) examined texting in CMC and how this affects the standard forms in language production in academic writing. The participants were students in a Pakistani university, aged 19-25 years old. The method of this survey was based on the triangulation of questionnaires and students' English essays as samples and they were examined for any possible SMS characteristic features. The results of the questionnaires brought to light that 72% of the students affirmed that their English writing skills are clearly affected by SMS language. Additionally, their educators recognized (80%) that the most affected area of students' language skills is writing. The researchers of the study opine that proficient students in the language structure and its standard forms, either grammatical or lexical, might be aware of the proper and required context each

³ American Standard Code for Information Interchange. The term represents any text form in electronic devices.

time. Therefore, they have the ability to switch to the relevant and pertinent register and style of formal or informal writing situations.

Freudenberg (2009) illustrates in her dissertation that high school students already made use of the SMS speak features in their formal written work in school a decade ago, which was a consequence of frequent CMC use. The results of her study were based on samples of written Afrikaans students' work in English as first and second language. The findings revealed, first of all, that the young students were devoted users of cell phones, in other words, fanatic and proficient SMS users. All of the participants confirmed the influence of SMS features in their formal school writing and, according to the conducted survey, there was indeed an empirically found impact on their written work for school. This might be attributed to the high frequency of SMS usage. Finally, Freudenberg stated concerns about the future spelling skills of youths, because they are used to abbreviating words, using initialisms or respelling words, during their online discourse.

Salem (2013) conducted a study about the impact of technology, especially on chatting applications, on adolescents' writing skills of the English language in Kuwait. The students who participated in the study were either intermediate school students (11-15 years old) or students of secondary education (11-18 years old). The prerequisite of participating in the survey was the extended use of text and instant messaging. Salem conducted oral interviews in order to collect data for this study. Negative outcomes were revealed for participants' (11-18 years old) self-reported writing skills of the English language. The most affected areas were vocabulary, spelling and grammar. Salem emphasizes that this phenomenon, the adolescents' 'problematic' writing skills, may have occurred due to the fact that youngsters use abbreviations and linguistic shortcuts in CMC. As a result, having a negative impact on their formal writing skills in schools accordingly.

Going on to the literature review of previous studies in linguistics, Dorbane and Gjaileb (2018) conducted a study with a focus on the impact of cyber language and texting on the academic writing skills of students at the university of Djillali Liabes in Algeria. First of all, they intended to examine whether social media use affects the writing skills of students in the bachelor's program 'English as a Foreign Language'. Therefore, their aim was to focus on the performance of English writing skills. Their second goal was to reveal if and how social networking develops or prohibits students' writing skills. The survey was conducted by questionnaires and a classroom dictation list. The findings of the study unveiled that the academic writing skills of the students are affected on various levels. That is to say, for instance, the 1st year students seemed to have not fully adjusted the conventional orthographic norms compared to their elders. The authors point out that this may occur because the younger students are not as assimilated as the 3rd year students in regard to the cyber language. In other words, the 3rd year students make more use of electronic devices, like cell phones and computers, for academic purposes. The second finding revealed that students with a higher academic level accomplished higher scores on the conventional spelling test. Thirdly, they tested if the age of the students influences the exposure level to cyber language, for example they hypothesized that younger students would be less exposed to the cyber language in contrast to their older peers. The results showed that the older students were more capable of writing (68.7%) in the conventional form of the words than their younger peers (40%). This finding correlates with the fact that the senior students had been 'trained' in the use of cyber language on social media much more than the 1st year students, in regard to academic purposes. The final finding deals with the educational level of the students and the percentage of spelling errors they make.

The survey unveiled that the 3rd year students could apply the standard spelling rules more easily than the 1st year students. Particularly, the higher the educational level, the higher score in spelling performance. All in all, the abovementioned study revealed that the older students showed better performance than the younger. The reason why this happens may be the following: the 3rd year students are better trained in the use of cyber language, and in academic writing on the whole, so they were aware of how to adjust their language for each requested writing report, disregarding the ‘errors’ occurring during CMC use.

On the other hand, Chepkemoui et al. (2018) were more specific in their study and they decided to test the influence of Facebook usage on students’ spelling skills on English written assignments. The study refers to students of secondary education. The researchers conducted their survey through questionnaires, interviews and sample documents of their written papers. The study revealed that the online chat application Facebook plays a vital role in students’ academic English writing skills. Almost 80% of the participants agreed that they utilize short forms of written words when typing on Facebook, either while they are chatting or leaving comments on their online friends’ posts. In addition, the participants also affirmed that they do not pay attention to the ‘correct’ spelling of words on Facebook, since other users do not seem to consider proper spelling important. Furthermore, based on the document samples of the participants’ assignments, the researchers found that many of the short forms of the words written on social media were also detected on their official academic assignments. Their teachers acknowledged this fact by affirming that they have detected a great number of spelling mistakes in the students’ English assignments; teachers consider social media to play a crucial role in this. Academics suggest that this kind of ‘misspelling’ and using short forms of words tends to be a habitual tendency of the youth, since they spend countless hours in front of their computer and mobile screens, and so developing such an academic performance full of misspellings and “omitted or wrong punctuation” (p. 168). According to the survey, the misspelling of the English words includes any kind of textism, e.g. *b4* instead of ‘before’, *4give* instead of ‘forgive’ or *coz* instead of ‘because’. 20% of the students combine separate words, like *alot*, and approximately 30% of them seem to deal with the confusion of homophones, such as *whether* instead of ‘weather’ or homonyms, *principle* instead of ‘principal’. An impressive percentage of them (34%) showed that they omit letters when using cyber language, e.g. *intresting* instead of ‘interesting’.

Another study, by Cougnon et al. (2017), revealed results about spontaneous writing and dictation of French young users during the use of social media. Regarding the youngsters’ performance on spelling tasks, the researchers specially focused on dictation tests and online Facebook conversations. The general outcome showed that the participants’ language level was relatively low, since there was a tendency for grammatical errors based on the information received by the dictation tests. There were two kinds of spelling tests; on the first one, the students showed to perform “one error every five words and every six words on the second” (p. 314) test. Based on previous literature, the majority of the students believed that the grammatical and lexical structure of the French language is one of the most demanding and challenging parts. Types of orthographic errors that occurred during the study are the following: “omission of letters and accents, incorrect singular/ plural agreement between determiner and noun and between subject and verb, a lack of awareness about rule-governed final letters and confusion between spoken homophones” (p. 324) and, finally, ‘incorrect’ usage of apostrophes. Anything that has to do with usage of the cyber language of the students, that is “the density of textisms in the written output” (p. 324),

on Facebook use, the study revealed that a maximum of 30% of the written forms were affected by CMC use. In other words, the participants seemed to utilize graphic morphemes, such as emoticons, instead of conventional words, or expressive punctuation (i.e. more than one exclamation mark). Consequently, the researchers found out that CMC users have adopted an attitude to play with the conventional writing style of the language by punctuating their chats and adding graphic variations, a trend which is dominant among younger users. In this way they feel accepted in their peers' social circle and receive a boost as well in social credibility. Moreover, when using an unconventional style of writing, the users can avoid any grammatical or lexical misspelling of the words. Despite all this avoidance of the usage of 'normal' words, the researchers unveiled a relevant novel tendency of the CMC writing rules. On Facebook chat, a number of students seemed to correct themselves by utilizing an asterisk, after finishing a sentence, in order to write the flawed word with the correct orthography. As the authors mention, that is quite new evidence, thus more future research should be done in order to reveal under which circumstances this phenomenon occurs.

Plenty of sources refer to the writing styles and skills of CMC users. A further example of these is Verheijen (2015), whose study focuses on the uncommon orthography of the Dutch youth on social media. For the study, she based her evidence on samples of text and instant messages as well as on microblogging (e.g. Twitter) for the age group of 13-25 years old. The focal point of the article is the deviation from and any usage of unconventional spelling of the standard Dutch language, on various social media applications. The two primary variables that affect and control this trend are the CMC mode (medium) and the age of each individual user.

According to the results, there is a significant correlation between CMC mode and the amount of textisms used. Particularly, instant messaging shows higher frequency scores of textism than microblogging. Verheijen points out that each type of CMC has its own exclusive style of typed communication. For instance, instant messaging is a synchronous type of communication, thus it demands a rapid, direct and swift reply by the users. This means that the interlocutors are forced to answer in an agile and conversational manner ignoring the proper spelling or the revision of what they have already written. Moreover, the receivers of the instant messages are usually people from our social circles of family and friends, who tend to pay less attention to the 'correctness' of the writing. On the other hand, the asynchronous method of communication, namely Twitter, reveals fewer textisms. In this communicative mode, the users have more available time to revise and proofread their writing and alienate any kind of misspellings, since the "messages are exchanged sequentially over time" (Verheijen, 2015, p. 134). On top of that, messages and posts are visible to the general public; therefore, the users tend to pay attention to their spelling in order to avoid any kind of negative comments by other users.

Regarding the usage of textisms by each age group, results have revealed the following: the age group of adolescents (12-17 years old) seems to make more frequent usage of textisms in their CMC writing than young adults (18- 23 years old). The author suggests that many of the young adults regard textese as more childish and immature and, for this reason, they opt for more standard Dutch writing. However, adolescents take better care of their writing on microblogging, so they utilize textisms less. The reason has been already mentioned above and is the same with those posts on Twitter which are more easily accessible to a wider range of users.

Drouin (2011) examined the "frequency of text messaging, the use of textese and literacy skills" (p. 67), namely reading accuracy, spelling and reading fluency. The survey was conducted among American college students and it was based on

questionnaires about the frequency of use of text messaging, accessing social networking sites (SNS), such as Facebook and MySpace, and using textese in diverse contents (e.g. sending e-mails to friends or to their professors at university). In order for the researcher to test the students' literacy skills he made use of a standardized test, named *Woodcock Johnson III*, which included reading and spelling achievement. Regarding the spelling abilities of the students, which is the main focal point of the present study, findings revealed a positive correlation between text messaging and literacy skills. The researcher speculates that students with higher reading and spelling abilities may make more frequent use of text messaging than the ones with poorer performance. Therefore students, who lack a great spelling performance, might avoid using text messaging because they find it an 'unappealing medium' to express their opinion and conduct conversations.

Mingle and Adams (2015) mainly focused on social media participation and academic performance of senior high school students. The primary aims of their study were the influence of social media on students' grammar and spelling skills and on their general academic performance as well as the time spent on social media and how adolescents networked and participated. There was a mixed usage of methods; firstly, there was a survey conducted of students in four different high schools in Ghana, India, and interviews conducted with the head teachers of these schools. The survey unveiled mostly negative outcomes in regard to academic performance of the students. Particularly, the researchers mentioned a general impoverished academic performance. As a result, the students showed insufficient grammar and spelling skills, belated submission of the assignments, minor study time due to the huge time spent on social networking through Facebook and WhatsApp. The authors present a frequent usage of the slang language during online communication which students usually transfer to their academic writing and environment. Regarding social media and English language usage, results showed that the majority of the participants were influenced in a negative way, when they utilize English for their online conversations with their peers. Participants, specifically, affirmed the primary usage of 'wrongly' structured sentences and the limited attention to 'proper' grammar and spelling rules. The findings of the interviews revealed a tendency of lazy writers regarding the appropriate usage of the English language. Furthermore, this fact was confirmed by their teachers, who indicated similar evidence on the academic scripts.

Lastly, Verheijen (2018) raises concerns about the fact that much exposure to or usage of the unconventional spelling writing systems in CMC might insinuate or even lead to actual literacy problems, jeopardizing reading, writing, and spelling skills. In her research about the spelling competency of the Dutch youth, she revealed that mobile phone dependency was a predictor of youth producing deficient and inadequate writing skills on their essays. Or, on the other hand, this could mean that students with less rich vocabulary seem to be more addicted to mobile usage. On top of that, the findings implied that youngsters who received more text messages on a daily basis tended to compose more informal essays, that is to say, less formal and "syntactically less complex" (p. 202). Therefore, inferior syntactical skills might mask a general issue to the youths' literacy skills, since orthography and syntax are part of the grammar structure.

4. Relevance of the study

Considering the abovementioned information regarding CMC and computer literacy, the researcher chose to measure the spelling performance of native Greek speakers, focusing on youths, whose daily usage of social media is thriving, by forming the following research question:

Does the current use of social media affect the spelling skills of young Greek native speakers?

The societal relevance of the study lies in the extensive use of social media in Greece by young people. According to Gurcan (2015), social media entered daily life when the first cyber-communication platforms appeared in 2005. Since then, this novel trend has resulted in changes in societal and personal norms. Youngsters, between 13 and 25 years old, appear to be more prone to adopting this trend because they utilize social media as an integral part of cyber-communication with peers.

This trend has been much discussed in academia and the Greek press, because it has facilitated the emergence and establishment of Greeklish for communication (Koutsogiannis, 2012). Matakias (n.d.), a Greek intellectual, wrote about the phenomenon of linguistic poverty, a trend that he feels characterizes Greek youth in the past years. He mentioned that “language is the mirror of oneself and of the nation accordingly” (p. 17). He also cited the words of Marios Ploritis, a well-known, twentieth-century Greek linguistic specialist, who stated that not only is “a language a communication medium but also it cultivates the way of the thinking, the ethos and the aesthetic quality of a nation” (p. 17).

According to Koutsogiannis (2012), the majority of Greek youths (43%) utilize Latin script in CMC, while only 27.9% write digital messages in the original Greek language. In another study by Koutsogiannis and Mitsikopoulou (2003), Greeklish is discussed as a socio-cultural phenomenon that has given rise to many complaints, not only by academic experts and intellectuals, but also by the public at large. Moreover, academic experts, intellectuals, and society have argued that the phenomenon of Greeklish resulted from Greece joining the European Union, as an extensive usage of English was observed since then. The same is true for other European countries that do not list English as an official language. Regarding this issue, concerns have arisen about the role of globalization in the development of vernacular languages.

Thus, popular Greek media have continuously complained about the future of the Greek language. Most conservative newspapers claim that this linguistic phenomenon should be confronted to resist the threat of globalization and “the unholy plans to replace the Greek alphabet with the Latin” (Ellinikos Voras, 14/01)⁴. To them, Greeklish represents a foreign invasion and “others too will wake up to this national danger” (Vradini, 18/01).

According to Koutsogiannis and Mitsikopoulou (2003), the debate over Greeklish focuses on the substitution of Latin script for the Greek alphabet. Some believe that Greek people should defend their culture and country, as exemplified in the following statement: “throwing off the national system of writing is a betrayal of the national ethos” (Tipos tis Kiriakis, 06/01). Hence, some suggest that Greek citizens

⁴ Superscripted numbers that follow the name of newspapers indicate the date and the year of publication of each text, as found in Koutsogiannis and Mitsikopoulou (2003).

should protect their unique language from external threats and invasions. In several sources, this threat is described with lexical items such as a “danger signal,” an “attack” (Koutsogiannis & Mitsikopoulou 2003), and “the attack upon our language” (Estia, 07/03). From a historical perspective, the Greek language is “most ancient but always contemporary and alive, [and] this language may not suffer degradation by the abolition at our own hands” (Ellinikos Voras, 21/01).

Over the past ten years, an increasing number of Greek scholars, educators, and media have raised concerns about the use of Greeklish by a broad range of Greek citizens, especially youth. For instance, Babiniotis (2013), a professor of linguistics and president of the Greek Culture Foundation, pointed out that Greek citizens “tend to be alienated of the ‘image’ of an original word due to the massive usage of Greeklish, despite the availability of the Greek font on technological tools.” He suggested that Greek people take better care of their language, since it symbolizes the tradition, the history, the culture, the mindset, and the identity of the Greek nation.

Iakovou, a teacher of the Greek language in Cyprus, shared the same opinion in her interview “Why youth opts for Greeklish” (2016). Iakovou mentioned that many of her students have learned the correct dictation of a word when they indeed saw it written with Greek registers instead of Greeklish ones. However, teenagers opt for Greeklish in web discourse because they feel a sense of belonging in society as a team of youngsters who have their own identity and common interests (“The language of young people, Greeklish, foreign words in Greek,” 2017).

Moreover, Kaimaki (2014) pointed out that mobile media users write in Greeklish out of habit. She indicated that if someone is not offended when first seeing a word written ‘inappropriately’ in Greeklish, then this spelling becomes a habit, and the writer may adopt this new habit forever. Kaimaki raised concerns for the future of the Greek language, challenging young Greek philologists and language teachers to act immediately.

Social media have become a modern lifestyle habit. Hence, youngsters have a personalized language for communication, and these social media tools may affect the writing skills of students in a serious manner (Mirtsioti, 2009). According to Mirtsioti (2009), the reason for typing in Greeklish is an addiction to a new trend, a desire to save time, and an affinity for CMC. However, the consequences of using Greeklish on the orthography and syntax of 12- to 18-year-olds are clear to her, and this issue might affect children of even younger ages. For example, the majority of high school students (77.4%) opt for Greeklish during online discussions via SMS, Skype, email, chat forums, and even handwritten documents. Nearly 50% of high school students have written in Greeklish for two or more years and do so more than once daily (Mirtsioti, 2009).

Furthermore, Michalopoulos (“Greeklish dominates the Greek language,” 2013), a professor of the Latin language at the University of Athens, affirmed that according to prior surveys, long-time Greeklish users tend to forget the correct spellings of Greek words and become incorrect spellers of the Greek language. However, another teacher in Greek secondary education, Konidas (“Greeklish dominate the Greek language”, 2013), claimed that the writing trend of Greeklish could not affect the Greek register alone. Thus, an additional reason for the supposed decay of Greek language skills among youths might be a decrease in reading of novels during their spare time.

In a study by Koutsogiannis and Papadopoulou (2008), the researchers wanted to examine the number of language mistakes made by both native and non-native teenagers who speak Greek in online discourses, and the study revealed that the spelling mistakes were nearly 3% of the total number of mistakes for the native speakers, while

the amount of written words without accent marks reached almost 10%, again for native speakers. Moreover, as Xydopoulos et al. (2019) demonstrated in their study, not only educators seem concerned about Greek students' orthography skills, but also the parents of Greek students face similar concerns. These parents are worried that their children deviate from proper Greek orthography because social media and Greeklish are prevalent in daily life.

Finally, perceived as one of the most significant threats to the Greek language is the rapid development of technology and its novelties, which are supposedly leading toward the degradation of the Greek language and its formal written register: "Our language... is being displaced by the new technology... Computers have now forced us in our everyday life to use the Latin alphabet" (Apogevmatini tis Kiriakis, 14/01). Kiriakis (14/01) stressed that "what is being cultivated is not only the replacement of alphabet but even of our spelling," suggesting that changes in spelling are impactful.

The scientific relevance of the use of and attitudes towards Greeklish is also notable. Based on the threat of the English 'invasion' on other less widely spoken languages, Koutsogiannis and Mitsikopoulou (2003) stated that little linguistic research has investigated the effects of the Internet and CMC on less widespread languages such as Greek. No previous research has been conducted on CMC and its effects on the writing and spelling skills of Greek youths. For this reason, the aforementioned research question has been formulated.

The scientific relevance lies in that previous studies on social media use, cyber language, and literacy put too much one-sided focus on languages with the Latin script and particularly English, instead of including other scripts and less widely spoken languages. Based on prior literature and on the identified research gap, the following hypotheses have been formulated as plausible, but conflicting, outcomes of the present study:

1a (expected): Greek youths who make more use of social media and especially of Greeklish in CMC, will tend to make more spelling mistakes.

1b (possible): No significant results will be found, since Greek youths are able to master both the registers of informal CMC language/ Greeklish and formal Standard Greek equally well.

1c (unexpected): Greek youths who make more use of social media and especially of Greeklish in CMC, will tend to make fewer spelling mistakes.

Thus, the final and main research question of the study has been formed accordingly: "Does the current use of social media affect the spelling skills of young Greek native speakers?"

5. Methodology

Based on previous literature and prior studies relevant to CMC use, the researcher decided to conduct a new study. The present study examined the impact of social media usage and online discourse in Greeklish on the linguistic skills of native Greek speakers, with a focus on orthography. The target group of the survey involved the young population of native Greek speakers.

The present study pertains to the category of quantitative research. In the current research, I will attempt to determine the impact of social media use as well as of Greeklish on the spelling skills of native Greek speakers. Therefore, my goal here is to measure if the sample's results on a computer-mediated communication survey predict their results on two spelling tasks, which test their skills in Greek orthography. The experimental technique used here is a survey, which is actually questionnaires distributed to a sample population "in order to identify trends, behaviors and characteristics" (Lorenzetti, 2007, p. 11).

5.1 Participants

The sample consisted of 133 participants in total ($N = 100$ females, 75.2%; $N = 33$ males, 24.8%) aged 10-30 years, who were Greek native speakers and the majority lived in Greece ($N = 115$, 86.5%). Firstly, 143 participants filled in the survey, but ten participants were excluded from the data analysis because they exceeded the intended age. The sample was divided into two different groups based on the participants' age; *Group 1*: 10-19 years old (teenagers) and *Group 2*: 20-30 years old (young adults). This age range (especially Group 1) was selected because participants in that age range are still young and can more easily be affected by the use of CMC and Greeklish while chatting online, because their standard language writing skills are still being formed at school. After the completion of the survey, participants' ages turned out to range from 13 to 30 years old with an average age of $M = 24.31$ ($SD = 4.9$). The first age group, Teenagers, involved ages from 13-19 years old, with an average age of $M = 16.4$ ($SD = 2.04$) and 25 participants in total. The second age group, Young Adults, consisted of 108 participants in total and the average age was $M = 26.14$ ($SD = 3.2$).

Participants of both age groups were lower and higher educated, including university or school alumni and students. The majority of the participants were students at university or had already obtained a Bachelor's degree ($N = 63$) or a Master's degree ($N = 35$). High school ($N = 15$) (involving ages from 16 to 18 years old, according to the Greek educational regulations) and junior high school ($N = 16$) (aged 13 to 15 years old, according to the Greek educational regulations) were the next most frequent educational levels.

Table 2
Demographic characteristics of sample

		Frequency	Percentage (%)
Age	Teenager	25	18.8
	Young adult	108	81.2
Gender	Male	33	24.8
	Female	100	75.2
Country of origin	Belgium	1	0.8
	Cyprus	2	1.5
	France	2	1.5
	Germany	4	3.0

	Greece	115	86.5
	Netherlands	6	4.5
	Not specified	1	0.8
	Sweden	1	0.8
	United Arab Emirates	1	0.8
Educational level	Primary education	1	0.8
	Junior high school	16	12
	High school	15	11.3
	Bachelor's studies	63	47.4
	Master's studies	35	26.3
	PhD studies	3	2.3
TOTAL		133	100

5.2. Data collection instruments & design of the study

The research reported in this thesis involved the administration of an anonymous survey to native speakers of the Greek language, living in Greece or abroad. The design of the survey was mainly inspired by previous linguistic studies, particularly by Koutsogiannis and Mitsikopoulou (2006) and Xydopoulos et al. (2019).

The data were collected using a questionnaire in order to receive details about participants' demographic profile and information in regard to their social media and CMC use. The survey was created with the software of Qualtrics, a web platform especially designed for academic surveys, which mostly includes questionnaire templates. The questionnaire was distributed online, through social media, i.e. Facebook, e-mails, WhatsApp, LinkedIn, and Viber (more details about this in the Procedure section).

The questionnaire consisted of four central parts (see Appendix). The first part of the survey gathered demographic information about the participants, such as their gender, educational background, age and country of origin.

The second, and the largest, section of the survey was dedicated to two spelling tasks (see Appendix). Its point was to measure respondents' orthographic skills in the Greek language. The tasks were specifically designed for this reason.

Each spelling task involved 15 multiple choice questions. In the first spelling task, there was one key answer and one or two distractors as alternative answer options; the participants had to select the correct answer. In case they chose the correct option, they were awarded with 1 point. The sentences in the orthography task originate from authentic Greek literary texts which are currently taught in Greek schools. For instance, they belong to well-known Greek literature works, such as *Odyssey* (e.g. '*The suitors returned to the palace while Telemachus descended on the beach, praying to Athena*') or to prominent Greek authors, like Dido Sotiriou (e.g. '*When we got to Moskov Street and I saw all my friends eating out carelessly, something was stuck inside me*') or Nikos Kazantakis (e.g. '*As can be seen from the words of the two elderly women, there was a tendency for the Greeks to underestimate the tourists visiting our country*'). Finally, these fragments deal with typical Greek topics which involve religion (e.g. '*The images replenish the idols and so those who worship them are idolaters*'), historical throwbacks (e.g. '*Westerners with the cross in hand came to overthrow the cross and every concept of Christian morality*') and societal views (e.g. '*The liberation of women in the Western world came about for economic reasons*').

The second part of the spelling task included another 15 items, of a 'Right/Wrong' nature. In case the participants opted for Wrong, they had to suggest an alternative ('better') spelling. Regarding the score of this spelling task, a maximum

score of 1 could be attained for each question. Namely, the respondents received 1 point when choosing “Right” and the item was correctly spelled, while they received 0.5 points when choosing “Wrong” and the item was not correct. Another 0.5 points were received when they had given the correct alternative over the wrong items. Most of the words were commonly used in Greeks’ daily discourses (e.g. έννοια = meaning, παγκοσμιοποίηση = globalization, ενόσω = meanwhile, ιχθυοκαλλιέργειες = fish farming, αίθριος = cloudless/ serene, etc.) and some of them were of an advanced level (e.g. καινοτόμος = novel, ψευδοευδαιμονισμός = pseudo-gratification, άμοιρες = unfortunate, συνέτειναν = contributed to, etc.).

All items on both spelling tasks were intended to test participants’ knowledge regarding the correct orthography of the spelling of Greek letters that are problematic in CMC, such as the vowels /η/, /ι/, /ει/, /ου/, /υ/, /ο/, /ω/,/αυ/, and the choice between one or two consonants. Both spelling tasks included an intermediate and advanced level of vocabulary, in order for the whole age range to be able to comprehend them. In some of the fragments in the first task, the context might seem complicated or difficult, but the tested words were intended to be comprehensible and recognizable for all ages.

The structure of the materials was simple and clear; answer options were brief in order to achieve swiftness in the survey. Lastly, both the questionnaire and the spelling task were written in Greek, since all participants were native speakers of Greek.

The next section of the survey collected data about participants’ access to social media. Participants were presented with a list of thirteen questions regarding their access to and usage of social media, as well as questions for measuring computer literacy, in particular about Greeklish. The respondents were assigned to answer questions such as the following: how often and how many years they made use of social media, how much time they spent on them on daily basis and which were their preferences regarding online chat applications and online social networking platforms. With regards to Greeklish, the questions involved information such as if they make use of Greeklish while chatting online, and for which reasons they opt for writing in Greeklish. Moreover, they were asked if they find Greeklish hard or annoying to read, if they believe it affects the authentic Greek spelling, and if they utilize the autocorrect tool while composing a written message in the online conversations. Likert scales were used, with answers ranging from ‘Never’ to ‘Always’, ‘Absolutely disagree’ to ‘Absolutely agree’, ‘Less than 2 years’ to ‘Over 10 years’, and ‘Less than 30 minutes’ to ‘Over 4 hours’.

The fourth, and final, part of the survey included four self-reported questions about participants’ own competency in the Greek language. In the first question, respondents were assigned to point out their competency on Greek grammar, vocabulary, orthography and oral skills. In the second question, participants had to choose the difficulties when composing formal (i.e. filling or writing documents requested by public services or law documents, telefaxes etc.) or informal (i.e. documents that people exchange with each other on daily basis but not for professional purposes) documents and their daily written assignments at school or university. The final two questions examined if they believed that frequent use of social media affects their spelling skills and, lastly, if they believed they made more spelling mistakes due to extensive usage of social media. The questions in this part were based on a Likert scale ranging from ‘Absolutely disagree’ to ‘Absolutely agree’. This section aimed to ascertain participants’ perceptions towards their language skills. The findings will indicate if participants’ responses are consistent with their performance on the two spellings tasks, and if they over- or underestimate their language competency, particularly their orthographic skills, in the Greek language.

Using a questionnaire as a survey method provided ample advantages. For instance, Jones et al. (2008) point out that it is a cost-effective solution for gathering a lot of data. Through questionnaires, especially when administered online, a much larger sample of the population could be reached, as compared to using interviews. Finally, with regards to the data analysis, web questionnaires can be more effectively handled since they can be extracted to the analysis software directly. In other words, there is “accurate transcription of data to the database for analysis” (Jones et al., 2008, p.18).

5.3. Procedure

Participants were recruited randomly for the survey. The survey was created in Qualtrics and it was distributed online, mainly through social media, for instance, on Facebook and LinkedIn. Secondly, the link was also sent through online chatting applications, i.e. Viber, Skype, WhatsApp, Instagram and Facebook messenger, directly to friends, family members, former colleagues, and former students of primary and secondary educational level. Additionally, the questionnaire was distributed through blanket e-mails, too. The duration of the survey was almost fifteen days, starting from 15th April to 30th April 2020.

5.4. Variables

The variables in the current study were as follows:

Independent variables: (1) CMC/social media use and (2) use of / attitudes towards Greeklish

Dependent variable: Greek spelling skills

Moderating variable: Age group

5.5. Data Analysis

Descriptive statistics and response frequencies of both the demographic characteristics and the questions of social media and Greeklish are presented. Responses of social media use and Greeklish were combined into two scales, as they were adequately correlated, in order to achieve a single measure of usage for each variable. Differences between social media use, Greeklish use and attitudes, and spelling task score across age groups were assessed using multivariate analysis of variance (MANOVA). As we expected that performance on the given tasks may be negatively associated with both social media use and Greeklish, a linear regression model was implemented, in order to examine the relationship between spelling task score and those independent variables. The variable “Age group” was used as a moderator variable, in order to examine if the effects of the independent variables on the spelling task differed across the two age groups. For all statistical analyses, IBM SPSS Statistics was used.

6. Results

The two tasks which aimed to test participants' orthography skills in the Greek language had striking results. The maximum score for both tasks combined was 30, which indicates an excellent performance. High scores were frequently observed on both spelling tasks.

Regarding the first spelling task, where participants had to choose the correct spelling based on multiple choice alternatives, the mean score of the correct answers was 12.30 ($SD = 2.15$), while the highest score was 15 and the lowest 4.

On the second orthography task, participants first had to indicate if the word was spelled correctly and if not, they had to provide what they believed to be the correct spelling. This spelling task was divided into two parts. The first part includes solely the correct 'Right' or 'Wrong' nature of the answers. Respondents performed rather well on this task too ($M = 8.85$, $SD = 1.24$), while the highest score was 10.5 and the lowest 5. Such a trend seemed to prevail as well on the second part (the given alternatives by respondents of the speculated 'wrong' words) of this orthography task, as the mean score of correct alternatives of was 2.18 ($SD = 1.38$) where the highest score was 4.5, and the lowest 0.

Consequently, on average, the final total score of the participants' performance was 23.32 ($SD = 3.79$) with the maximum achieved performance score determined at 30, and the minimum at 10. All this is summarized in Table 3.

Table 3
Descriptive statistics of the scores on the spelling task

	M	SD	Lowest	Highest
First part	12.30	2.15	4.0	15.0
Second part (only R/W)	8.85	1.24	5.0	10.5
Second part (alternative)	2.18	1.38	0.0	4.5
Final score	23.32	3.79	10.0	30.0

Furthermore, the respondents were asked to rate their own level of access to and usage of social media and social networking in general. The first question involved the years they had by now used social networking or chat applications. The participants could answer 'Less than two years', '2 to 4 years', '4 to 6' and '6-10 years' or 'more than 10 years'. The majority of the respondents ($N = 43$) replied that they had been active members on social media over the last 6 to 10 years. Little difference was there, only two units, with those who replied that they had been using social networking for their communication with the others for more than ten years ($N = 41$) (see Appendix, Table 1).

The findings relating to the time spent on social media and on chatting applications are similar. The majority of the participants demonstrated that they spend between one and two hours of their daily routine on web chatting applications ($N = 43$) and on social networking ($N = 42$). In second place, we find the time spent between 3 and 4 hours; on social networking $N = 33$ and on chatting applications $N = 35$ (see Tables 4 and 5).

Table 4
On a normal day, how much time do you spend on social media (for instance, Facebook, Instagram, LinkedIn, etc.)?

	Frequency	Percentage
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Less than 30 minutes	8	6.0
About an hour	30	22.6
1-2 hours	42	31.6
3-4 hours	33	24.8
More than 4 hours	20	15.0

Table 5

On a normal day, how much time do you spend on chat apps (for instance, WhatsApp, Facebook Messenger, Viber)?

	Frequency	Percentage
Less than 30 minutes	17	12.8
About an hour	28	21.1
1-2 hours	43	32.3
3-4 hours	35	26.3
More than 4 hours	10	7.5

Participants were also asked to present the main reasons for using computer-mediated communication (CMC). A majority of the respondents revealed that they mostly use it in order to keep in touch with their friends, family and colleagues (97.7%, $N = 130$), or to find the latest news (65.4%, $N = 87$). As a third option they ranked socializing and making new friends (39.8%, $N = 53$). Fewer participants opted for event planning, job seeking or to promote services and products, and even fewer participants referred to other reasons, such as entertainment, relaxing, etc. (see Appendix, Table 2).

The findings relating to participants' access to computer-mediated communication indicated a high level of access to certain social media platforms. YouTube ($N = 115$), Facebook, ($N = 114$), and Instagram ($N = 106$) showed the highest access levels in comparison to the other social networking platforms, such as LinkedIn and Twitter. A small minority of participants (only 9) indicated other social media platforms, like TikTok, Pinterest, and Tinder (see Appendix, Table 3).

The chatting applications for online communication to which respondents had the highest level of access in Greece was Facebook messenger with 91% ($N = 121$) of the respondents. A large proportion of participants, 82.7% ($N = 110$), demonstrated that they prefer Viber as their main communication medium, which is notably higher than WhatsApp, which seems to be favored solely by 36.1% ($N = 48$) of the respondents. A few respondents ($N = 5$) suggested that they make use of other chat applications, for instance Skype, Discord, Slack, Microsoft Teams (see Appendix, Table 4).

Data about respondents' use and perception of Greeklish were collected too. A large majority of the participants replied that they never ($N = 58$) or rarely ($N = 40$) (cumulative percentage 73.7%) type in Greeklish during their online communication (see Table 6). Solely 18% of the respondents ($N = 24$) indicated that they type in Greeklish sometimes and 9.2% of them make use of Greeklish on computer-mediated-communication often ($N = 7$) or always ($N = 4$).

Table 6

When you are connected to the internet (online), how often do you type in Greeklish?

	Frequency	Percentage
Never	58	43.7
Rarely	40	30.0
Sometimes	24	18.0
Often	7	5.2
Always	4	4.0

The 75 participants who replied that they type in Greeklish (just excluding those who responded ‘Never’) answered two additional questions. Firstly, they were asked to point out the reasons why they adopt Greeklish for their written computer-mediated communication. Nearly the half of the respondents, 52.6% ($N = 40$), reported as the most common reason saving time by avoiding changing the keyboard language. Text typing speed and habit followed as favored reasons. Only 22.4% ($N = 17$) opted for a lack of spelling check. Secondly, nearly the half of the respondents ($N = 52$) replied that their reason for typing in Greeklish has nothing to do with other users’ usage of Greeklish online (see Appendix, Tables 5 and 6).

The responses relating to the perception to Greeklish showed significant variation among the respondents. For instance, there was a large percentage of participants, 34.6% ($N = 46$), who kept a neutral position towards the difficulty of reading Greeklish. In addition to this, it is interesting that 27.8% ($N = 37$) of the respondents do not think that Greeklish is difficult to read, while 22.6% ($N = 30$) thinks that Greeklish is indeed arduous to be read. On the other hand, when the respondents were asked if they find the usage of Greek annoying or inconvenient during online communication, findings show that the majority of them agree with this notion (68.4%) to a greater or lesser extent. Thus, annoyance very much exceeds difficulty in reading for the respondents (see Appendix, Tables 7 and 8).

Moving forward to the crucial question if the participants believe that Greeklish negatively affects the Greek language, the findings are quite outstanding. An enormous percentage of nearly 80% of the participants ($N = 106$) reported that they agree or absolutely agree with this statement (see Table 7).

Table 7

“I believe that the use of Greeklish, during a written conversation on the internet, negatively affects the Greek language.”

	Frequency	Percentage
Absolutely disagree	2	1.5
Disagree	9	6.8
Neutral	16	12.0
Agree	42	31.6
Absolutely agree	64	48.1

On the last question of this questionnaire section, the participants were called to answer to the usage frequency of their device’s autocorrection feature, while they are composing a message on chatting applications (see Appendix, Table 9). A small majority of the participants, cumulative percentage 52.7%, reported that they rarely ($N = 36$) or sometimes ($N = 34$) make use of this feature.

In the fourth and last part of the questionnaire, there were questions about the language competency of the participants based on self-reports (see Appendix, Tables 10, 11, 12, and 13). The findings revealed rather positive self-evaluations. 37 participants (27.8%) agreed to be capable in Greek grammar. The vast majority of the respondents claimed that they are highly proficient with their vocabulary skills (82%, $N = 109$). Nearly 79% of them ($N = 105$) reported that they have good oral skills in the Greek language. Finally, a considerable number, almost 80% ($N = 106$), agreed or absolutely agreed that they are highly proficient with their orthographic skills, which came in line with their spelling tasks scores.

The same trend appears from self-reports on their difficulties when composing or writing various kinds of documents (see Appendix, Tables 14, 15, 16, and 17). For example, 56.4% ($N = 75$) replied that they do not face any specific difficulties during

school or academic exams, nor when they have to prepare their homework for the next day at school or university. Roughly one third of the participants (25.6%, $N = 34$) responded that they face difficulties when composing a formal document, which is the case for less than a quarter of the participants (17.3%, $N = 23$) when they have to write an informal document. Last but not least, the majority of participants (40.6%, $N = 54$) believe that social media affect their own skills in orthography, while 33.1% ($N = 44$) of them disagreed with this (see Appendix, Table 18). Meanwhile, on the final question regarding their language competency after starting using social media on their daily life, 69 of the respondents (51.9%) disagreed or absolutely disagreed that they tend to make more spelling mistakes, 33 of the participants (24.8%) kept a neutral stance towards this notion and, finally, 30 participants (22.6%) admitted that their spelling skills were affected due to extensive social media usage (see Appendix, Table 19).

The two questions which addressed the time spent on social media and chat platforms (Q39-Q40) were summed into a total score, in order to create a single measure of social media use for each participant. The two variables were correlated ($r = .508, p < .001$) and the total social media score had adequate reliability (Cronbach's $\alpha = .674$). A higher score in this total measure would indicate that a participant uses social media and chat platforms more frequently.

The same procedure was applied to questions which assessed use and attitudes towards Greeklish (Q41, Q43 – Q46). The first two questions were reverse recoded, in order for all the questions to have the same direction. Pearson's correlation coefficient was estimated to assess the relationship between the variables regarding Greeklish use and attitudes towards Greeklish. The estimated correlations between the variables are presented in Table 8. Participants who used Greeklish more often when chatting online, were less likely to find Greeklish annoying ($r = .604$) and hard to read ($r = .318$). It was also found that question Q43 only correlated significantly with the frequency of Greeklish use, as measured in Q41, ($r = .425$) and it was excluded from the final scale, as this specific question was presented to Greeklish users only ($N = 75$). The sum of the four questions was calculated, in order to have a single score for Greeklish use and attitudes, as the variables were adequately correlated (Cronbach's $\alpha = .770$). A higher score for the total score would indicate that a participant uses Greeklish less often and his attitude is negative towards it.

Table 8
Correlations

	Q41	Q43	Q44	Q45	Q46
Q41	-	-	-	-	-
Q43	.425**	-	-	-	-
Q44	.318**	.139	-	-	-
Q45	.368**	.170	.270**	-	-
Q46	.604**	.217	.544**	.623**	-

** . Correlation is significant at the 0.01 level.

Q41: When you are connected to the internet, how often do you type in Greeklish?

Q43: When discussing online, I use Greeklish because other users use it as well.

Q44: I find Greeklish is hard to read.

Q45: I believe that the use of Greeklish, during a written conversation on the internet, affects negatively the Greek language.

Q46: I think writing in Greeklish is annoying.

The descriptive statistics of the spelling task, Greeklish and social media use among teenagers and young adults are presented in Table 9. A one-way multivariate analysis (MANOVA) for the spelling task performance, social media use and

Greeklisht, with age group as the between-subjects variable, showed a significant multivariate effect of age group, $F(3, 129) = 3.897, p = .011$. The corresponding univariate analyses showed a significant effect of age group on the spelling task score ($F(1, 131) = 7.642, p = .007, \eta_p^2 = 0.054$) and on Greeklisht ($F(1, 131) = 4.923, p = .028, \eta_p^2 = 0.036$). On average, young adults scored higher ($M = 23.75, SD = 3.50$) than teenagers ($M = 21.50, SD = 4.51$) on the final score of spelling task (sum of all three spelling task parts) and had a higher score on the Greeklisht scale ($M = 15.31, SD = 3.16$), indicating that they use them less often and have more negative attitudes towards them, compared to teenagers.

Table 9

Descriptive statistics of Spelling Task, Greeklisht use and attitudes, and Social Media use

	Age group							
	Teenagers				Young adults			
	M	SD	Lowest	Highest	M	SD	Lowest	Highest
Spelling task	21.50	4.51	10.00	29.50	23.75	3.50	11.00	30.00
Greeklisht	13.76	3.15	8.00	20.00	15.31	3.16	5.00	20.00
Social media use	6.60	2.14	3.00	10.00	6.05	1.93	2.00	10.00

Furthermore, significant negative correlations were found between social media use and spelling task performance ($r = -.239, p = .007$) and between social media use and Greeklisht use and attitudes ($r = -.214, p = .017$). On the other hand, no association was found between spelling task performance and Greeklisht (Table 10).

Table 10

Correlations

	Final score spelling task	Total score for Greeklisht	Total score for social media use
Final score spelling task	-	-	-
Total Score for Greeklisht	.173	-	-
Total Score for Social media use	-.239**	-.214*	-

** ($p < 0.01$) * ($p < .05$)

The descriptive statistics for each educational level on the spelling task are presented in Table 11. The category 'primary education' was excluded from further analysis, as it contained only one participant. It was found that spelling task performance showed an increasing trend over the educational levels (see Figure 1), starting from Junior high school ($M = 21.25, SD = 4.06$), followed by High school ($M = 21.5, SD = 5.18$), University ($M = 23.76, SD = 3.46$), Post-graduate studies ($M = 23.93, SD = 2.92$) and PhD ($M = 28.50, SD = 1.32$).

Table 11

Descriptives of Final score spelling task

	N	M	SD	Lowest	Highest
Primary education	1	19.00	-	19.00	19.00
Junior high school	16	21.25	4.06	15.00	28.00
High school	15	21.50	5.18	10.00	29.50
Bachelor's studies	63	23.76	3.46	11.00	29.00
Master's studies	35	23.93	2.92	15.00	28.50
PhD studies	3	28.50	1.32	27.50	30.00

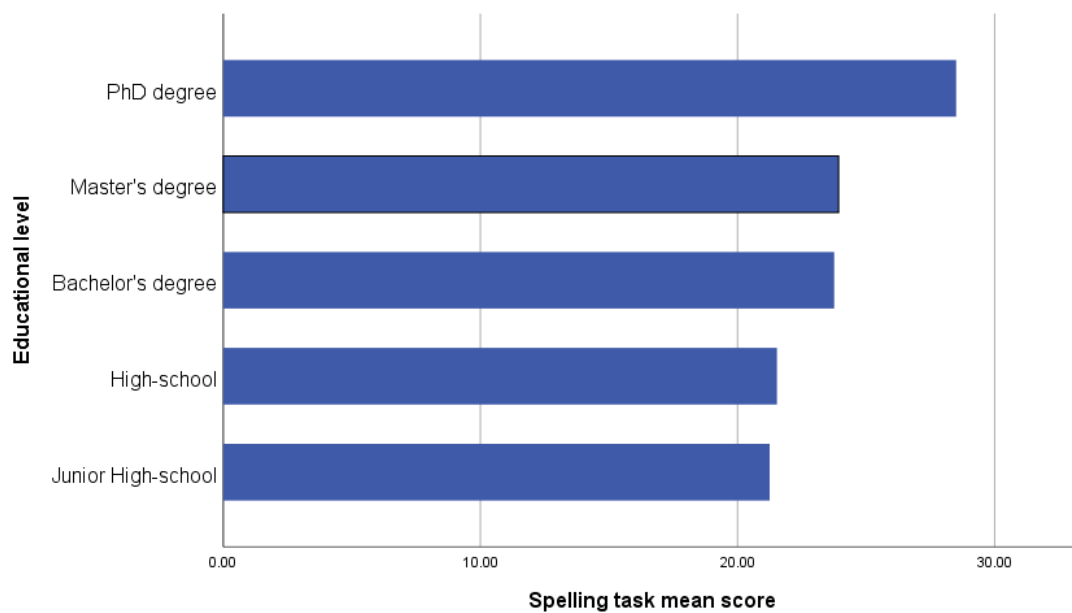


Figure 1. Spelling task score across educational level groups

A multiple linear regression model was implemented to measure the effect of social media use and Greeklish on the spelling task grade, moderating for the age group.⁵ All the variables were entered simultaneously into the equation and no selection method was implemented, due to the small number of predictors. The results showed that the regression model was overall significant, $F(5,119) = 2.95, p = .015$. However, the moderator effects, as shown by the addition of interaction terms, between social media use and age group and Greeklish and age group, were not statistically significant, accounting for an increase of 0.6% on the spelling task score's variability ($p = .652$). Therefore, the interaction terms were excluded, and the final model only included social media use score, Greeklish score and age group as the independent variables. This model explained 10.4% of spelling task score variability and was overall significant, $F(3,121) = 4.68, p = .004$ (Table 12). The results showed that there is a statistically significant negative relationship between social media use and spelling task score ($b = -0.369, p = .031$). In addition, age group was a significant predictor of the model ($b = 1.726, p = .043$), indicating that young adults scored, on average, 1.726 more points than teenagers. Finally, there was no significant effect of Greeklish on the spelling task score ($p = .294$).

Table 12

Regression analysis of social media use Greeklish and age as predictors of spelling task performance

Variable	B	S.E. B	β
Intercept	22.58	2.08	
Age group	1.73	.84	.18*
Greeklish score	.11	.10	.10

⁵ The variable "Educational level" was highly correlated with age group and the number of interaction terms ($n = 10$) between educational level and the two independent variables (Social media use and Greeklish) would reduce the model's reliability, as it would include an excessive number of correlated parameters (multicollinearity). Therefore, educational level was excluded from the regression analysis.

Social media use score	-37	.17	-.19*
R ²	.10		
F	4.68**		

* $p < .05$, ** $p < .01$

7. Discussion

As an extension of prior empirical research on instant messaging, textese, and literacy, this research examined the effect of social media usage on the spelling skills of native Greek youth, due to the constant online use of ‘Greeklish’ (a combination of Greek and English) by native Greek speakers in computer-mediated communication. This was examined in an experimental study, through a survey distributed online. Participants were Greek teenagers (13-19 years old) and young adults (20-30 years old). The primary goal of the study was to define the effect of social media and online chatting on the orthographic skills of young native speakers of Greek. The study aimed to reveal which social media applications Greek youths favor, to what extent they use Greeklish when communicating through the Internet, and their attitudes toward the use of Greeklish for online communication. The study also included self-reports of participants’ language competency, but the most crucial part was respondents’ performance on two spelling tasks in the Greek language.

Greeklish is an alternative hybrid language, a branch of the normative Standard Modern Greek language. It is mostly used during online discourses. According to previous linguistic research (Warschauer et al., 2002; Verheijen, 2015, 2018; Mingle & Adams, 2015; Drouin, 2011) and the concerns of many people within Greek society, scholars, linguistic professors, and experts (Koutsogiannis & Mitsikopoulou, 2003; Babiniotis, 2013; Koutsogiannis & Papadopoulou, 2008; Xydopoulos et al., 2019), this new type of digital language may massively affect the literacy skills of Greek teenagers and young adults, especially in the realm of orthography. The analysis shed light on whether participants’ performance on spelling tasks was affected by (a) their use of social media or (b) their use of Greeklish and attitudes toward Greeklish.

The examined words in the two spelling tasks ranged in difficulty: easy, medium, and advanced. On the two spelling tasks, respondents had to choose how specific words should be spelt, such as *γενναιόδωρος*, *ξένοιαστοι*, *υποτιμώντας*, *ενδεχομένως*, *παγκοσμιοποίηση*, *συνέτειναν*, *άμοιρες*, *ψευδοευδαιμονισμός*, *δεσποτισμός*, *ξεστράτισαν*, *υψίπεδο*. Participants’ knowledge was tested on the different functions of the letters *ο*, *ω*; *ι*, *η*, *ει*, *οι*, *υ*; *αι*, *ε*, which are crucial in Greek grammar and orthography. These letters are easily confused by Greek learners and speakers. In the first spelling task, the word *ενδεχομένως* (“possibly”) is an adjective and presents the modus; like all modals, and most of the adjectives in Greek, it is written with an *ω* in the last syllable instead of an *ο*. Therefore, there should have been no reason for the respondents to be confused, since this is an axiom that is learnt from the early classes of primary school. In the second spelling task, the level of difficulty was raised. Despite the advanced level of orthography, one word was much easier. The word *ενόσω* (“meanwhile”) is a conjunctive adjective, which refers to a period of time. As mentioned above, the last syllable of the adjectives is written with an *ω*. In this study, it was observed that respondents wrote *ενώσω*, which is the first singular person in future tense of the verb *ενώνω* in the Greek language, which means ‘connect’. However, the orthographic misspellings of the respondents are quite surprising, since Greek students are taught these axioms from the first day of primary school to the final day of high school. This finding contrasts the work of Jonge and Kemp (2012, p. 51) who stated that the more learners encounter a word, the easier it is for them to keep the “orthographic representations in memory.”

In this study, the independent variable of age group was a significant positive predictor in the regression model, with young adults scoring higher than teenagers on the spelling tasks. The results of the regression analysis revealed that age affects the

spelling skills of native Greek speakers. In other words, teenagers performed worse on the spelling tasks than young adults. This disparity also occurred in prior research. For instance, Dorbane and Gjaileb (2018) reported that older, third-year, university students performed better in writing normative language than their younger peers. That the group of young adults outperformed the teenagers on the two spelling tasks makes sense, since young adults are older than teenagers and have more experience in literacy and writing instructions in education. According to the results of the present study, more than half of the young population (ages 20-30) attend tertiary studies. It is common for young adults to obtain more than one degree (i.e., bachelor's degree, master's degree, doctoral degree). After many more years of formal education, it makes sense that young adults have more knowledge of the spelling rules and axioms (Mitselos & Mitselos, 2015). Furthermore, they have more experience in the different usage of cyber language (the register used in informal CMC) and the standard language (as used in formal, academic writing), which will help them adjust their language accordingly.

On the other hand, the factor of age was unrelated to the impact of Greeklish or of social media use on spelling performance, according to the regression analysis. This finding contradicts with previous research in the linguistic field. Past research, which involved native Greek students (12-18 years old), revealed that 68% of the junior high school students, 88.5% of high school students, and 70% of vocational school students used Greeklish during their online communication. 15.7% of them in total affirmed that they even prefer to write their school assignments and personal school notes in Greeklish. The results of the study showed that Greeklish caused students to make more spelling mistakes on their school assignments and tasks ("Greeklish harms the Greek language seriously", 2009) – which was not confirmed in the present study.

Concerning the usage of Greeklish for social media, the results of the MANOVA revealed a significantly more negative stance toward and less frequent use of Greeklish among young adults, compared to teenagers. Accordingly, the latter revealed a more positive stance and greater usage of Greeklish. The measurement of the 'Greeklish' variable included the frequency of Greeklish use and attitudes toward Greeklish. In contrast to their young adult peers, teenagers did not share the same notions, expressing positive attitudes toward the continuous usage of Greeklish. This finding is supported by the literature, which shows that teenagers seem to adapt to novel linguistic trends with less effort than their adult counterparts (Koutras, 2005), also showing a more positive regard for Greeklish. Moreover, teenagers opt to spend their free time on social networks and playing online games more than any other social activity (Koutras, 2005). However, in this study, the differences in Greeklish scores were quite slight between the two groups. Still, the results indicated that teenagers made more use of and preserved a more positive stance towards Greeklish.

Regarding the scores of social media usage, the two groups showed a slight difference in their mean scores, with the teenagers using social media somewhat more than the young adults, although the difference was not statistically significant according to the MANOVA. As a whole, teenagers often attempt to express themselves through social networking applications, where they have the opportunity to create their personal profile accounts (Lehnart, 2010), which may explain their slightly higher use of social media. On social media, members have also the option to communicate with their peers online (Androutsopoulos, 2014) for informal interpersonal communication. Additionally, prior literature shows a high percentage of Internet addiction among the young population via extensive Internet usage on mobile phones and social media platforms, as the technical tools of cyberspace have become an inextricable part of

teenagers' daily lives (Stamlakou et al., 2015). Moreover, according to Stamlakou et al. (2015), Internet usage of more than ten hours per week can lead to addiction, which is consistent with the findings of this study—participants of both groups identified as spending at least two hours per day on social networking websites and applications. In this matter, in an article on a Greek online newspaper (“Study shows 37 percent of teens addicted to internet”, 2020) it was stated that 37% of teenagers prefer to be connected to the Internet in 2019, while only 13% of teenagers preferred to go online in 2013. In 2015, young adults reported having lower social media participation than teenagers, despite the fact that young adults' work might be highly associated with computer usage and teleworking, which requires them to be connected continuously online (Mitselos & Mitselos, 2015). Recent research revealed that only 27.8% of young adults in Greece were normal users of social media and 51.3% of them showing mild Internet addiction (Grammenos et al., 2017). Internet addiction was measured by staying online for 5 to 10 hours per day and being online at night.

Concerning the relationship between the score on the spelling tasks and social media use, the regression analysis reported a negative statistically significant outcome, which means that respondents who spend more time on social media tended to have lower performance on the spelling tasks. This corresponds to the significant negative correlation that was found between the total score for social media use and spelling task performance. Consequently, hypothesis 1b—Greek youths can master both registers of informal CMC language / Greeklisch and formal standard Greek equally well—and hypothesis 1c—Greek youths who spend more time on social media and use more Greeklisch tend to make fewer spelling mistakes—are both rejected, and hypothesis 1a is partly confirmed.

The findings here support previous literature. Prior research also revealed that university students, aged 19-25 years old, tend to perform less well in writing, especially in terms of spelling mistakes in their academic assignments and exams, when they identify as having a higher level of online communication (Aziz et al., 2013). This may result, for example, in the occurrence of textisms such as abbreviations and unconventional punctuation in school writing (Aziz et al., 2013; Cougnon et al. 2017; Dorbane & Gjaileb, 2018; Drouin, 2011; Yousaf & Ahmed, 2013). The same trend is present with secondary education students, in the present study between the ages of 13 and 19 (Chepkemoui et al., 2018; Cougnon et al., 2017; Freudenberg, 2009; Mingle & Adams, 2015, Salem, 2013;). Teenage students may use CMC language features in their formal school writing, influenced by extensive CMC usage that includes abbreviations and linguistic shortcuts, with little regard for the standard orthography in online communication. Mingle and Adams (2015) detected the use of slang idioms in formal school writing – idioms that continuously appear in online discourses. Thus, both teenagers and young adults demonstrate a lower performance in formal academic assignments and exams, in the present study specifically in spelling performance, because of extensive social media usage.

In this study, however, participants' self-reported findings of language competency revealed an opposite notion. Respondents implied that social media usage does not affect their own spelling skills (41%), with 26% having a neutral attitude about it. Participants admitted that correct spelling shows the writer is educated, and to this end, 52% claimed that they do not tend to make more spelling mistakes than they used to before using social media. Thus, participants in this study overestimated their spelling skills, since outcomes yielded a negative relationship between social media usage and spelling task performance.

The total score for social media usage revealed a negative correlation to the total score for Greeklish. Hence, respondents who spent more time on social media platforms scored lower on Greeklish usage and attitudes, meaning that these participants make use of Greeklish more often and perceive it more positively (remember that a higher score on Greeklish indicated that a participant uses Greeklish less often and his attitude is negative towards it). The vast majority of participants in the present study replied that they never or rarely (77%) use Greeklish online and 73.4% acknowledged the importance of orthography in the Greek language. Chanou (2014) cited testimonials of a Greek language teacher and supported that not Greeklish per se threatens the Greek language or the spelling skills of Greek students. The language teacher of the secondary education also claimed that Greeklish is rather a societal than linguistic phenomenon, which is formed and affected by the technological trends of our current digitalized ages. On top of that, “the Greek language has showed signs of endurance and expressiveness several times in the past, even if it has borrowed words from other languages. The specific peculiarity of writing Greek words with Latin characters simply shows that it serves young people in the fast pace of their lives” (Chanou, 2014). In addition to this notion, Konidas (“Greeklish dominate the Greek language, 2013) suggested that external factors, such as the absence of reading literary books during teenagers’ leisure time, may play a severe role to any linguistic crisis. Finally, anything related to the social media usage and the spelling performance has been presented in the last previous paragraphs.

Such findings contradict recent studies, such as a study by Xydopoulos et al. (2019), where 76.2% of student participants confirmed a preference to write in Greeklish in CMC discourses. Moreover, similar findings resulted from a study ten years earlier, where Mirtsioti (2009) surveyed Greek secondary school students, and the findings revealed that over 70% of the students opted to use Greeklish in online communication. In sum, much prior research (*About "Greeklish"*, 2013; *Babiniotis: "Youth will regret using Greeklish"*; *Greeklish dominate the Greek language*, 2013; Koutsogiannis & Mitsikopoulou, 2003; *The language of young people, Greeklish, foreign words in Greek*, 2017; Xydopoulos et al., 2019) revealed that the extensive usage of Greeklish negatively affects the spelling performance of native Greek speakers. In the present study, only 9% of the participants admitted a preference for writing in Greeklish. However, approximately half the students replied that writing in Greeklish is practical to avoid switching languages on a keyboard from English to Greek, and 34.2% of the respondents choose Greeklish to improve text typing speed. This finding is consistent with Tzekou et al.’s (2007) study, which confirmed that people opt for Greeklish to type and respond to messages more quickly. Greeklish was also chosen for pragmatic reasons, because users might not have direct access to a Greek keyboard.

Finally, there was no significant effect of Greeklish on the spelling task score; Greeklish was not a significant predictor in the tested regression model. This finding partly supports hypothesis 1b: Greek youths can master both registers of informal CMC language / Greeklish and formal standard Greek equally well. Moreover, it seems to be consistent with the self-reported questionnaires regarding language competency: participants indicated that they do not face difficulty in completing academic assignments, either affirming (45%) or keeping a neutral stance towards (30%) the statement that no obstacles from using Greeklish hinder them in their formal writing skill. Furthermore, the majority of respondents reported excellent performance of Greek language in orthography (57.9%), grammar (56.4%), vocabulary (54.1%), and

oral skills (53.4%). Additionally, in this study, teenagers and young adults acknowledged that spelling is crucial in the Greek language.

8. Conclusion

This study was based on competing hypotheses regarding a possible relationship between extensive social media usage, use of and attitudes towards Greeklish, and the spelling skills of young native Greek speakers. Based on previous literature and research, it was argued that the language competency of youths, especially in spelling and writing skills, may be directly affected by the various cyber language adaptations of CMC. These linguistic features, such as abbreviations, word contractions, shortenings, number homophones, and initialisms, may profoundly influence the spelling and writing activities of students and young adults. Regarding Greek CMC practices, the Greek population tends to use Greeklish extensively, which is an alternative hybrid language of Greek written with Latin script during social media discourse.

Through the distribution of online questionnaires to native Greek speakers living in Greece and abroad, the researcher examined participants' spelling skills by designing two spelling tasks suitable for this context. Both tasks included the examination of the most critical spelling axioms: the correct usage of the vowels *ι, υ, η, ελ, οι; ο, ω; αι, ει*, which are easily confused in written CMC. On the first spelling task, participants were assigned to complete the missing letter of words in multiple-choice sentences. On the second spelling task, participants had to decide if the spelling of an individual word was correct. If they judged that the spelling of the word was incorrect, participants were also asked to propose an alternative spelling. Moreover, participants replied to questions about their attitudes toward social media networking and chat applications, their frequency of using these platforms, and their use of and opinion about Greeklish. Finally, participants self-reported their language competency in Greek.

The outcomes suggest that Greeklish does not affect performance on spelling tasks. Age was a significant positive predictor of respondents' spelling performance, which means that young adults performed better in the spelling tasks than teenagers. More importantly, social media use was a significant negative predictor of spelling performance: participants who used social media more produced more mistakes on the spelling tasks. However, age was not a moderating factor influencing the relationship between, on the one hand, social media use or Greeklish use and attitudes and, on the other hand, the spelling skills of native Greek speakers, so the impact of social media use on spelling performance was equal for teenagers and young adults.

8.1. Limitations

This study does have some limitations. The survey included participants from 13 to 30 years old. Participants from the age group of teenagers (13-20 years old) were much fewer in number than participants from the age group of young adults (20-30 years old). Thus, the researcher did not have the opportunity to retrieve much information about teenagers' use of social media, their performance on spelling tasks, and their stance towards to Greeklish. Young adults are more educated and have spent many more years using social media and possibly Greeklish, which might explain why no effects of Greeklish use and attitudes on spelling performance were found – perhaps they have learned to separate these registers sufficiently. The much lower presence of teenagers as compared to young adults among the participants may also explain why no moderating effect of age group was found on the effects of social media use or Greeklish on spelling performance.

On top of that, the only method used for collecting the data for this study was the questionnaires; there was no triangulation with any other methods. This occurred because the research was conducted primarily online due to the physical allocation of the researcher abroad and not in Greece.

Additionally, to keep the research focused, the researcher limited this study to the examination of the effects of social media usage on the spelling ability of young, native Greek speakers. Thus, the scope did not expand to grammar or syntax, which may also be affected by social media use or Greeklish.

Another limitation of the study concerns the educational level of the participants and their knowledge of Greek orthography. Due to the researcher's bachelor and master studies of the Greek language and linguistics, participants might have had similar educational levels as the researcher, with higher than average knowledge of Greek orthographic rules. This predominance of highly educated participants may explain why no effect of Greeklish on spelling performance was found.

Finally, given the unrestricted access to an Internet search engine such as Google during the completion of the online survey, the participants may have searched for the correct spelling of each item in order to give correct answers. Therefore, the outcomes yielded from this study might be better than participants' actual spelling knowledge, and thus not reflect real-world trends.

8.2. Suggestions for further research

Based on the results of this study, there are still many issues to explore further. Suggestions for future research include the examination of Greek youths' command of the punctuation, grammar, and syntax of the Standard Modern Greek language, in combination with social media use and Greeklish. This kind of focus on research will indicate if there is more than one area affected, and not only orthography, by the usage of social media.

Furthermore, as the target population of this study was teenagers and young adults, future research could focus more on adolescents from 15-20 years old, since the sample of this age group was limited in the current study. Researchers may also examine language skills and competencies for native speakers of Greek aged 30 and above, because adults also spend much leisure time on social media today.

Finally, as mentioned above, the only method used for collecting the data for this study was the questionnaires. To yield more accurate results and improve the methodology, future studies should include written samples of text messages in order to retrieve actual and authentic samples of written cyber language. Moreover, face-to-face interviews could be conducted in real time: this could ensure that participants do not have the luxury of time to correct themselves, so the researchers would unquestionably retrieve authentic samples of spelling performance, in order to examine if it is indeed affected by cyber language.

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Appendix

A. Consent form

This study is part of my dissertation on the Department of Linguistics at Radboud University and examines the modern Greek language.

You have the right to participate in the study if you are Greek and 10-30 years old. In addition, you can take part in the study, even if you live abroad, and not in Greece, but your mother tongue is Greek.

As a participant, you will be asked to complete a questionnaire. This will take you about 10-15 minutes.

Make sure you clearly understand the statements before giving an answer. If you feel insecure about some words and their meaning or spelling, you can try to guess them based on the given context.

During the study you can indicate at any time that you want to stop participating, without having to explain why you want to stop. Discontinuation during the study has no consequences.

The data collected will be completely confidential. This means that under no circumstances will information be disclosed that identifies the respondent. If you would like to be informed of the results of this study, please let me know by sending an email to MARIA.SAPOUNTZI@student.ru.nl.

If you indicate that you wish to participate in this study, there is an updated consent form immediately below. With your consent, you state that you are sufficiently informed about the study, you wish to participate and even voluntarily.

I confirm that:

- I was well informed about the study and have read and understood the written information about the study.
- I was informed that the current study is conducted by a student of Linguistics as part of the dissertation.
- I had the opportunity to ask questions about the study and my questions were answered satisfactorily.
- I was given enough time to consider whether I would give my consent.
- I participate of my own free will.
- I am young (under 18 years old), I participate of my own free will and my parents are aware of my participation.

I understand that:

- I have the right to withdraw my consent at any time without having to justify and the withdrawal of my participation has no further consequences.
- My information will be processed anonymously.
- The results of the study cannot be considered as a diagnostic test.

If you do not want to give your consent, please leave the questionnaire and thank you for your time.

Yours sincerely,
Maria Sapountzi
Linguistics studies
Department of Language and Communication

B. Questionnaire

Section I: Personal Information

1. Please specify your age

2. What is your gender?

Male

Female

Other

3. What is your educational level?

Primary Education

Secondary Education

Vocational Education

Bachelor's Degree

Master's Degree

PhD

4. What is your Country of residence?

Part 2a: Social media use

1. How long have you been using social media or chat applications?

Less than two years

2 to 4 years

4-6 years

6 to 10 years

More than 10 years

2. Please specify which social media platforms you use. Put 1 in the most frequently used platform, followed by 2, 3 etc. If you don't use a specific platform, leave the square blank.

Facebook

Instagram

LinkedIn

Twitter

YouTube

Other (please specify): _____

3. Please specify which chat applications you use. Put 1 in the most frequently used application, followed by 2, 3 etc. If you don't use a specific app, leave the square blank.

WhatsApp

Viber

Facebook Messenger

iMessage

Other (please specify): _____

4. Please rank the following in descending order, as for your purpose of using social media. Put 1 next to your first priority and 6 next to your last priority.

To keep in touch with friends and family

To socialize or make friends

To promote products or services

For event planning

To find employment

To find the latest news

Other (please specify): _____

5. On a regular day, how much time do you spend on social media (for example, Facebook, Instagram, LinkedIn)?

Less than 30 minutes

About an hour

1-2 hours

3 to 4 hours

More than 4 hours

6. On a regular day, how much time do you spend on the chat applications (for example WhatsApp, Facebook Messenger, Viber)?

Less than 30 minutes

About an hour

1-2 hours

3 to 4 hours

More than 4 hours

7. When you are online, how often do you type in Greeklish (Greek words written with Latin registers)?

Never

Rarely

Sometimes

Often

Always

8. If you answered 'Never' in Question 6, please skip this question. For which of the following reasons do you use Greeklish? Please check all that apply.

Text-typing speed

Habit

Saving time (avoid changing keyboard language)

Lack of spell check

Other (please specify) _____

9. When chatting online, I use Greeklish, because others use it as well.

Strongly Disagree

Disagree

Neutral

Agree

Strongly Agree

10. I believe that Greeklish is hard to read.

Strongly Disagree

Disagree

Neutral

Agree

Strongly Agree

11. I believe that using Greeklish when chatting online negatively affects the Greek language.

Strongly Disagree

Disagree

Neutral
Agree
Strongly Agree

12. I believe that writing in Greeklish is irritating.

Strongly Disagree
Disagree
Neutral
Agree
Strongly Agree

13. When you chat online, how often do you use the autocorrect feature?

Never
Rarely
Sometimes
Often
Always

Part 2b: Self-report about language competency

1. Please indicate the extent to which you agree or disagree with the following statements:

SD = Strongly Disagree
D = Disagree
N = Neutral
A = Agree
SA = Strongly Agree

You feel that you are competent with:

Grammar	<input type="radio"/>	SD	<input type="radio"/>	D	<input type="radio"/>	N	<input type="radio"/>	A	<input type="radio"/>	SA
Vocabulary	<input type="radio"/>	SD	<input type="radio"/>	D	<input type="radio"/>	N	<input type="radio"/>	A	<input type="radio"/>	SA
Spelling	<input type="radio"/>	SD	<input type="radio"/>	D	<input type="radio"/>	N	<input type="radio"/>	A	<input type="radio"/>	SA

Speaking SD D N A SA

You face difficulties:

While writing exams/ school tests	<input type="radio"/>	SD	<input type="radio"/>	D	<input type="radio"/>	N	<input type="radio"/>	A	<input type="radio"/>	SA
While writing/ preparing the school/ university assignments for the next day	<input type="radio"/>	SD	<input type="radio"/>	D	<input type="radio"/>	N	<input type="radio"/>	A	<input type="radio"/>	SA
When writing a formal document	<input type="radio"/>	SD	<input type="radio"/>	D	<input type="radio"/>	N	<input type="radio"/>	A	<input type="radio"/>	SA
When writing an informal document	<input type="radio"/>	SD	<input type="radio"/>	D	<input type="radio"/>	N	<input type="radio"/>	A	<input type="radio"/>	SA

Social media affect your writing/ spelling skills:

SD D N A SA

You make more spelling mistakes than you used to before using social media:

SD D N A SA

C. Spelling Task

A) Συμπλήρωσε τα κενά των λέξεων με το σωστό γράμμα. (Fill in the gaps of the words with the correct letter)

1) Κάθε βιβλίο που φτάνει στα χέρια μας είναι φίλος γενναι_δ_ρος, πιστός και πολύ βολικός!

(Every book that comes to our hands is a generous, loyal and very friendly friend!)

- ό_ω
- ώ_ω
- ώ_ο

2) Οι Δυτικοί με το σταυρό στο χέρι ήρθαν να καταλ_σουν το σταυρό και κάθε έννοια χριστιανικού ήθους.

(Westerners with the cross in hand came to overthrow the cross and every concept of Christian morality.)

- ύ
- ί
- ή

3) Οι εικόνες αναπληρώνουν τα είδωλα και άρα αυτοί που τις προσκυνούν είναι ειδ_λ_λάτρες.

(The images replenish the idols and so those who worship them are idolaters.)

- ω_ο
- ω_ω
- ο_ω

4) Οι μνηστήρες επέστρεψαν στο παλάτι, ενώ ο Τηλέμαχος κατέβηκε στο ακρογ_άλ_, προσευχήθηκε στην Αθηνά.

(The suitors returned to the palace while Telemachus descended on the beach, praying to Athena.)

- υ_ι
- υ_υ
- ι_ι

5) Όταν φτάσαμε στην οδό Μοσκόφ και είδα όλους τους δικούς μου μαζεμένους να τρώνε ξέν_αστοι, κάτι ξεσφίχτηκε μέσα μου.

(When we got to Moskov Street and I saw all my friends eating out carelessly, something was stuck inside me.)

- οι
- ι

6) Υποστηρίζεται ότι ο θεσμός της οικογένειας απειλείται με διάλ_ση ή ανανέωση λόγω των νέων συνθηκών της ζωής.

(It is claimed that the institution of the family is in danger of collapse or renewal due to new life conditions.)

- ι
- υ
- η

7) Ο Νίκος Καζαντζάκης κατά την περιήγησή του στην Πελοπόννησο, επισκέπτεται το ναό του Επικούρ_ου Απόλλωνα που αποδίδεται στον Ικτίνο.

(Nikos Kazantzakis, while touring the Peloponnese, visits the temple of Epicurus Apollo attributed to Iktinos.)

- ι
- ει
- -

8) Όπως διαφαίνεται μέσα από τα λόγια των δύο ηλικιωμένων γυναικών υπήρχε παλαιότερα από τη μεριά των Ελλήνων η τάση να **υποτιμ_νται** οι τουρίστες που επισκέπτονταν τη χώρα μας.

(As can be seen from the words of the two elderly women, there was a tendency for the Greeks to underestimate the tourists visiting our country.)

- **ώ**
- **ό**
- **ού**

(As can be seen from the words of the two elderly women, there was a tendency for the Greeks to underestimate the tourists visiting our country.)

9) Η ένταξη άλλων φωνών στο κείμενο μέσω του διαλόγου, επιτρέπει την παράθεση απόψεων που **ενδεχομέν_ς** διαφέρουν από τις θέσεις του αφηγητή.

(The inclusion of other voices in the text through the dialogue, allows for views that may differ from the narrator's positions.)

- **ω**
- **ο**

10) Η απελευθέρωση της γυναίκας στον Δυτικό κόσμο **επ_λθε** για οικονομικούς λόγους.

(The liberation of women in the Western world came about for economic reasons.)

- **ή**
- **οί**
- **εί**

11) Ο συγγραφέας του κειμένου επισημαίνει τις ψυχολογικές επιπτώσεις φαινομένων, όπως η **παγκοσμιοπ_ηση (οί, ί, εί)** και η επέλαση της πληροφορικής.

(The author of the text points out the psychological effects of phenomena such as globalization and the evolution of information technology.)

- **οί**
- **ί**
- **εί**

12) Και τα δύο **συνέτ_ναν** και συντείνουν στην ψυχική φθορά του σύγχρονου ανθρώπου.

(Both contributed and contribute to the modern man's mental deterioration.)

- **ει**
- **ι**
- **η**

13) Η **α_φόρος** ανάπτυξη αποσκοπεί στο να βελτιώσει τις συνθήκες διαβίωσης του ανθρώπου.

(Sustainable development aims to improve human living conditions.)

- **ει**
- **ι**
- **η**

14) Πρώτο μεταξύ όλων συναντάμε μέσα από αιώνες **αμ_λικτων** θρησκευτικών πολέμων το ιδανικό της ανοχής.

(First of all, we come across centuries of relentless religious wars the ideal of tolerance.)

- **εί**
- **ί**
- **οί**

15) Το αναπόφευκτο απόηχο του ανθρωπισμού είναι η **δι_λίσθησή** του στον ατομικισμό.

(The inevitable disadvantage of humanism is its slide into individualism.)

- **ο**
- **ω**
- **οω**

B) Σωστό ή λάθος; Κρίνε εάν η ορθογραφία είναι σωστή ή όχι. Σε περίπτωση λάθους πρότεινε μία δική σου πρόταση.

(Right or Wrong: Judge whether the spelling is correct or not. In case you choose 'Wrong', present the correct spelling yourself.)

1) **άμειρες**

Right

Wrong

alternative option:

2) **ιχθιοκαλιέργειες**

Right

Wrong

alternative option:

3) **πιστοποιημένα**

Right

Wrong
alternative option:

4) ευνοεί

Right
Wrong
alternative option:

5) καινοτομικός

Right
Wrong
alternative option:

6) ψευδοευδεμονισμός

Right
Wrong
alternative option:

7) επετεύχθειςαν

Right
Wrong
alternative option:

8) ετερόφωτος

Right
Wrong
alternative option:

9) δεσποτισμός

Right
Wrong
alternative option:

10) ενώσω (επίρρημα)

Right
Wrong
alternative option:

11) έννοια

Right
Wrong
alternative option:

12) πλυμήρισε

Right
Wrong
alternative option:

13) ξεστράτησαν

Right
Wrong
alternative option:

14) αίθριος

Right
Wrong
alternative option:

15) υψύπεδο

Right
Wrong
alternative option:

D. Answer Keys

Spelling Task A.

1. ο_ω	9. ω
2. ύ	10. ή
3. ω_ο	11. οι 12. ει
4. ι ι	
5. οι	13. ει
6. υ	14. εί
7. ι	15. ο
8. ώ	

Spelling Task B.

1. Wrong, alternative: άμοιρες
2. Wrong, alternative: ιχθυοκαλλιέργειες
3. Right
4. Right
5. Right

6. Wrong, alternative: ψευδοευδαιμονισμός
7. Wrong, alternative: επετέυχθησαν
8. Right
9. Wrong, alternative: δεσποτισμός
10. Wrong, alternative: ενόσω
11. Right
12. Wrong, alternative: πλημμύρισε
13. Wrong, alternative: ξεστράτισαν
14. Right
15. Wrong, alternative: υψίπεδο

E. Tables

Table 1

How long have you been using social networking or chat applications?

	Frequency	Percentage
Less than 2 years	5	3.8
2-4 years	18	13.5
4-6 years	26	19.5
6-10 years	43	32.3
More than 10 years	41	30.8

Table 2

Purpose of using social media

	Frequency	Percentage
To keep in touch with your friends and family	130	97.7
To socialize or to make new friends	53	39.8
Product or service promotion	22	16.5
For event planning	15	11.3
Job seeking	23	17.3
To read the latest news	87	65.4
Other (please specify)	7	5.3

Other reasons for using social media Frequency

Boost self-confidence	1
Leisure purposes	1
Pet friendly purposes	1
Entertainment - Relaxation	2

Table 3

Social media platforms use

	Frequency	Percentage
Facebook	114	85.71
Instagram	106	79.7
LinkedIn	27	20.3
Twitter	18	13.5
YouTube	115	86.5

Other (please specify)	10	7.5
------------------------	----	-----

Other social media platforms Frequency

Academia	1
Pinterest	1
TikTok	5
Tinder	1
Tumblr	1

Table 4

Chat platforms use

	Frequency	Percentage
WhatsApp	48	36.1
Viber	110	82.7
Facebook Messenger	121	91.0
iMessage	33	24.8
Instagram Messenger	92	69.2
Other (please specify)	3	2.2

Other chat platforms Frequency

Discord	1
Skype	1
Slack	1
Microsoft teams	1
Swarm	1

Table 5

Reasons for using Greeklish

	Frequency	Percentage
Text typing speed	26	34.2
Habit	23	30.3
To save time (avoid keyboard language change)	40	52.6
Lack of spelling check	17	22.4
Other (please specify)	8	10.5

Table 6

When discussing directly online, I use Greeklish, because other users use it as well.

	Frequency	Percentage
Absolutely disagree	26	19.5
Disagree	26	19.5
Neutral	12	9.0
Agree	10	7.5
Absolutely agree	2	1.5

Table 7

I think Greeklish is hard to read.

	Frequency	Percentage
--	-----------	------------

Absolutely disagree	10	7.5
Disagree	37	27.8
Neutral	46	34.6
Agree	30	22.6
Absolutely agree	10	7.5

Table 8

I think writing in Greeklsh is annoying.

	Frequency	Percentage
Absolutely disagree	4	3.0
Disagree	13	9.8
Neutral	25	18.8
Agree	50	37.6
Absolutely agree	41	30.8

Table 9

When chatting online, how often do you use the auto-correction feature?

	Frequency	Percentage
Never	21	15.8
Rarely	36	27.1
Sometimes	34	25.6
Often	20	15.0
Always	22	16.5

Table 10

Please indicate the extent to which you agree or disagree with the following statements regarding your Greek language skills.

*Do you think that you are capable of: **Grammar?***

	Frequency	Percentage
Absolutely disagree	6	4.5
Disagree	14	10.5
Neutral	75	56.4
Agree	37	27.8
Absolutely agree	0	0

Table 11

Please indicate the extent to which you agree or disagree with the following statements regarding your Greek language skills.

*Do you think that you are capable of: **Vocabulary?***

	Frequency	Percentage
Absolutely disagree	1	0.8
Disagree	7	5.3
Neutral	15	11.3
Agree	72	54.1
Absolutely disagree	37	27.8

Table 12

Please indicate the extent to which you agree or disagree with the following statements regarding your Greek language skills.

Do you think that you are capable of: **Orthography?**

	Frequency	Percentage
Absolutely disagree	1	0.8
Disagree	7	5.3
Neutral	18	13.5
Agree	77	57.9
Absolutely disagree	29	21.8

Table 13

Please indicate the extent to which you agree or disagree with the following statements regarding your Greek language skills.

Do you think that you are capable of: **Oral skills?**

	Frequency	Percentage
Absolutely disagree	1	0.8
Disagree	6	4.5
Neutral	20	15.0
Agree	71	53.4
Absolutely disagree	34	25.6

Table 14

You face difficulties: *While writing (school) exams.*

	Frequency	Percentage
Absolutely disagree	21	15.8
Disagree	54	40.6
Neutral	32	24.1
Agree	22	16.5
Absolutely disagree	3	2.3

Table 15

You face difficulties: *When writing / preparing for school / university duties for the next day.*

	Frequency	Percentage
Absolutely disagree	21	15.8
Disagree	54	40.6
Neutral	33	24.8
Agree	19	14.3
Absolutely disagree	5	3.8

Table 16

You have difficulty: *When writing an official document.*

	Frequency	Percentage
Absolutely disagree	17	12.8
Disagree	42	31.6
Neutral	39	29.3
Agree	28	21.1
Absolutely disagree	6	4.5

Table 17

You have difficulty: When writing an unofficial document.

	Frequency	Percentage
Absolutely disagree	36	27.1
Disagree	59	44.4
Neutral	14	10.5
Agree	16	12.0
Absolutely disagree	7	5.3

Table 18

Social media affects your writing / spelling skills.

	Frequency	Percentage
Absolutely disagree	16	12.0
Disagree	28	21.1
Neutral	34	25.6
Agree	50	37.6
Absolutely disagree	4	3.0

Table 19

You make more spelling mistakes than you used to before using social media.

	Frequency	Percentage
Absolutely disagree	29	21.8
Disagree	40	30.1
Neutral	33	24.8
Agree	22	16.5
Absolutely disagree	8	6.0