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PRIMARY SCHOOL STUDENTS' WRITING IN NEW MEDIA – A CHALLENGE FOR SCHOOL AND STUDENTS

***Abstract:** For some time now we have witnessed the interweaving of speech, writing and picture in the new media communication (Facebook, WhatsApp, etc.). Writing texts in new media often contain elements of oral speech of conversational style, so Crystal (2006) calls them Netspeak. The use of new media has led to linguistic changes at all linguistic levels, and the reason for the frequent use of some characteristic elements is the language economy. From the earliest days the youth becomes the most prolific new media user. Due to the numerous criticisms of their literacy and standard knowledge, we have explored 401 Grade 8 students' representations of new media language elements in their texts written for school and leisure time activities. However, the results of the research have shown, that students use the elements of the language of new media language statistically significantly more often in new media in their leisure time than in written works done for school purposes, regardless of their gender and the county in which they live.*

***Key words:** elements of the language of new media, language of new media, the literacy of young people, written works done Grade 8 students,*

INTRODUCTION

Today, children and youth are, from their earliest days, surrounded with personal computers with unlimited internet access, mobile devices, multimedia and television. They belong to “digital generations” of youth who live in a different media environment, have a different manner of communication and life than youth of some twenty or more years ago (Matijević, Bilić, Opić, 2016).

Generations of young persons who have grown up with digital media are referred to by Prensky (2001) as *digital natives*, while their parents are referred to as *digital immigrants* both metaphors describing differences between attitudes of younger and older persons regarding digital technology, i.e. for growing up in a digital culture (digital natives), as opposed to arriving to it at an adult age (digital immigrants). “Digital natives” meet three requirements: they were born after 1980, they have access to digital technologies, and they possess skills for using such technology in a sophisticated manner (Palfrey & Gasser, 2011). It is actually rather difficult to set the chronological boundary precisely but in general terms that would be 1980, 1981 or 1982 (Palfrey & Gasser, 2011; Car, 2014).

The main characteristics of “digital natives” are fast use and receiving of information, multitasking, preference of graphics over text and hypertext over the linear approach, tendency for networked activity, immediate satisfaction, frequent awards and play (Prensky, 2011). Young people use new media in a different way than older generations have used them. They rely more on technology than previous generations. They use the internet and mobile phone not only for doing certain tasks but for companionship and fun, they send far more text messages than others, they edit their profiles on social networks and communicate through them, they do not know life without television and mobile phones, they post personal photos and videos online, they study, seek information and share it in a different way than adults, and, what is more, all of this is frequently done simultaneously (*multitasking*). In addition to that, they have more self-confidence, they are more liberal and open for changes, and they are strongly influenced by peers. However, they are unaware of grave mistakes they make such as revealing personal information on social networks which is a threat to their privacy (Vidak, 2014). Furthermore, present-day digital youth reads fewer newspapers and books, and gets the majority of information from the net, while, on the other hand, their need for constant connections and online conversations causes information overload and attention deficit (Borgman, 2017). Adolescents are the most frequent users of new forms of communication such as chat, electronic mail, SMS, blogs, social networks, *You Tube*, interactive and virtual videogames. For the majority part, they engage in many activities which young people used to do in the past but in a different manner. Today, they do that through the internet (conversations with friends, listening to music, reading newspapers, magazines and books, shopping, and similar (Car, 2014).

Besides the terms “digital generation”, “net generation”, “digital natives” referring to persons who have grown up in a media environment, there are also terms such as “generation y”, “Millennial Generation”, “IM generation”, “gamer generation”, “net geners”, and other. For the net-generation, the computer is not technology, but an elementary component of life, digital connections and networking are essential (Velički, Dumančić, Topolovčan, 2017: 256). Today’s primary school and high school students belong to this group. They have possessed mobile devices since the beginning of their compulsory education, and they make up the gear they regularly carry with them to school. There, they mostly use them for playing, for being available for calls and messages or in order to follow events on social media.

With the emergence of Web 2.0 tools, the use of social networks (*Facebook*, *Twitter* and others) abruptly increased. In communication through social networks, various forms of communication are combined, and new forms are developed thus creating new possibilities for communication (Tuor, 2009). New media communication intertwines language, orthography and images. Instead of being uttered, language, i.e. speech, is written interactively. Letters are often turned into images and vice-versa (Filipan-Žignić, 2012). New media blurred the boundaries between spoken and written language making it more difficult to determine whether we are referring to spoken or written language (Löffler, 2005). For an example, in communication

through the internet, for the first time the written word is used in immediate communication, e.g. on *Facebook* or chatrooms. What occurred was a kind of change of the written language in order to use it in entirely written simultaneous (more precisely quasi-simultaneous) communication which takes place in the mentioned services. With *Facebook* this is a written conversational language which, due to the media, is realized in written form (Filipan-Žigniċ, Mošmondor, 2015). We are referring to “new written texts with elements of conversation”, i.e. “typed conversations” in new media (Storrer, 2001).

Therefore, without giving it much thought, young persons are adopting a manner of writing in new media, i.e. writing that is abundant in elements of new media language. They are not overly concerned with the deviation from the standard Croatian language. On the contrary, in order to prove themselves, they attempt to shorten as many words as possible in a very creative and innovative way, they string emoticons in order to express feelings or exchange them for words or sentences, they use anglicisms in order to be “up-to-date” etc.

In such novel communication, minor or major changes can be observed at all linguistic levels. Therefore, they can be referred to as elements of new media language which have been confirmed in numerous research of new media language at the national level (Filipan-Žigniċ, Sobo, Veliċki, 2012; Filipan-Žigniċ, Mošmondor, 2015; Filipan-Žigniċ, Turk Sakač, 2016; Filipan-Žigniċ, Turk Sakač, Legac, 2017).

At the orthographic level, there are occurrences of writing using only lower-case letters (*ana bolje ti je da sutis*), only upper case letters (*HVALA, NEĆU DOĆI*) or mixed letters (*nogoMeT*) and in that way the orthographic standard of the Croatian language is infringed. There is also a recurrence of graphemes such as *thanxxx, heeeelllloo, superrrr, daaaaa, opaaaa* and other. At this level, there are occurrences of writing words together (*doćićuti u snove*) or separately (*naj ljepša si*) and of failing to use punctuation (*Hvala također*) or incorrect use of punctuation (*Obaras!! Inbox????, suti!!!!!!*), and, there is also evidence of errors caused by a particular medium, e.g. when the adjoining key is pressed on the keyboard (*party je u 2g*). Failing to use punctuation marks in new media writing by youth has become almost omnipresent. It is similar with using diacritics on letters *s, c, z* leading to messages such as *Joj leo suti, srecoo najljepsaa*.

In addition, at the orthographic (more precisely graphic-stylistic) level there is an occurrence of emoticons as one of the basic characteristics of new media writing. Emoticons serve to express current emotions. Those are characters, i.e. symbols that show our feelings, facial expressions and state at a particular moment in (written) communication through the internet or SMS. In a way, they represent abbreviations for expressing laughter, crying, sarcasm, humor, irony, teasing, joking and other moods, actions and states that are reflected on our face. They are favored among youth, but also among older users of internet services, SMS and *WhatsApp*. At the same time, they save time necessary for writing how we feel. Emoticons, except for forms such as 😊, 😄, 😁, 😂, occur in the form of primary emoticons – smiley face

or sad face :-), :-D, :- (and as amplified expressions of laughter :-))))), :-D.D. Besides emoticons, there are occurrences of other icons (*****, @@, (((, &&&&, →→, ♥♥, and other).

At the morphological level, there are no major deviations except in the formation of exclamations and symbols of laughter (*oooohoooo, uuuuuujjjj, haaaaahaa*, and similar) and in the formation of abbreviations whose use is most frequently a result of the limitation in the number of characters for particular services along with savings of time, space, and money. The main reason for using a large number of abbreviations is language economy. It is accompanied by language creativity as one of the reasons for using numerous abbreviations. Acronyms are the most frequent form of abbreviation on the internet (*LOL, BTW, LP, BMW*). Oftentimes even titles of research papers on the subject of new media language emanate wittiness in order to point to the language creativity characteristic for that discourse (e.g. Humphrys (2007) - *I h8 txt msgs*; Crystal (2008) - *2b or not 2b*, (2009) - *Txtng - The Gr8 Db8*; Bieswanger (2007) - *2 abbrevi8 or not 2 abbrevi8...*; Yusuf, Natsir, Yusra (2016) - *(. .)/ dont 4get 2 txt me plz!...*; Vlastelić and Vrbanac (2014) - *Btw, tnx što me lajkaš! Lol:*), etc.).

At the lexical level, there is frequent use of anglicisms, dialect, and vulgarism. Certainly, English as a global language in today's digital age strongly influences all languages it comes into contact with, Croatian as well. Many loanwords of English origin have migrated into the Croatian language through sports, while today they come mainly with American technology, film industry, entertainment industry and everything that is related to contemporary communication (telecommunication, global internet network and various search engines) (Opačić, 2006b). Although anglicisms are used by all age groups in a population as they symbolize modern life, young persons are the most active speakers-users of anglicisms and they daily write words such as *bed, bejbi, cool, event, fejs, frend, gamer, lajk, level* etc.

Vlastelić and Vrbanec (2014) warn that such uncontrollable use of elements of the English language undermines the language structure of Croatian language, which is evident at all language levels, particularly the lexical level i.e. in formation of new words, in taking over English expressions and in their becoming rooted and generally accepted.

Today, dialect in general and in new media language is frequently used for the purpose of grouping, identifying members of the same group and identifying with a particular regional identity (Filipan-Žignić, 2012). Research has shown that all dialects of the Croatian language (Kajkavian, Chakavian, and Shtokavian) are also present in new media language. It can be said that almost no informal texts written by youth exist that are not written in dialect. Dialect is often used as expression of closeness, and as imitation of the spoken language (*kaj, dojdi, cukor, pem, spim, bil, bute, buš, dojdem, fala, lejpi, rekel, delala*).

At the lexical level, in addition to the described dialect and interchangeable use of English and Croatian languages, we come across vulgarisms of domestic (*ma u pm, j*** se, sranje, kenjati, kravetina, konjusina, dupe, jbg, odjb*) or English origin (*f*** you, shit, bitch*).

At the syntactic level, there is media conditioned syntax which is characterized by deletion of the subject, deletion of the auxiliary verb, avoidance of the perfect tense, leading to the use subject-less phrases (*bio kod tebe, došao, vidio*), phrases without the auxiliary verb (*ja ĉuo ti juĉer stigla*) and the use of the aorist and imperfect tense instead of the perfect tense (*dođoh, vidjeh, stigoh* and similar). Dialogues established in new media communication frequently begin and end with a short greeting (*jutro, dan*).

Because of the seemingly easy acceptance of “deviant norms” in terms of language, many linguists are afraid of language “spoilage” as a result of writing in new media and identifying it with “mask(ing) dyslexia”, “poor spelling”, “mental laziness” “penmanship for illiterates” (Sutherland, 2002; Uthus, 2007) and similar. Humphrys (2007) refers to those who write short messages as “vandals who are doing to our language what Genghis Khan did to his neighbours eight hundred years ago” while Thurlow (2006) describes the language of short messages as overwhelmingly pessimistic with terms such as “unsuccessful”, “apocalyptic”, “criminal”, “bad” “destructive”, “intimidating” and “notorious”.

Frequent complaints by teachers and linguists regarding the negative influence of new media on writing in school and knowledge of the standard language, initiated research around the world and in Croatia with the aim to provide answers on the influence of new media on youth writing. Close inspection of foreign and domestic research of new media revealed that the majority of authors dealt with the analysis of use of new media or the analysis of language and communication through new media (Crystal 2006, 2011, Tagg 2009, Schlobinski 2002, Storrer 2001, Tour 2010, Dürscheid et al. 2010, 2016, König & Bahlo, 2014, Filipan-Žigniċ, 2012, Pavličević-Franiċ, 2005, 2011, Opaĉić 2006a, 2006b, Žic Fuchs, Broz & Tuđman Vuković, 2013, Nemeth-Janjiċ & Milinović, 2012, Halonja, 2002, and other).

Crystal gave a significant contribution to research on the language of the internet, providing a detailed analysis of internet language in his books *Language and the Internet* (2006) and *Internet Linguistics* (2011) and the language of SMS messages in the book *Txtng - The Gr8 Db8* (2009). Language that is specific of various internet services is termed by Crystal (2006) as *Netspeak* and contains elements of speech and writing. Koch and Österreicher (1994) for example, describe two concepts of literacy, i.e. conceptual literacy and conceptual orality which are in constant interaction in new media.

Many studies published in the last decade regarding the writing of youth in new media and literacy show a mixed pattern of results (Skelin Horvat, 2015; Plester et al., 2008, 2009; Crystal, 2009; Kemp & Clayton, 2016; Baron, 2008; Verheijen, 2013, 2016, 2017a, 2017b; Tayebinik & Puteh, 2012 and other). Despite the numerous positive correlations, there are also some negative findings which prove that the issue of the influence of new media on youth literacy is not a simple question and that it is necessary to carry out a lot of research regarding this phenomenon.

In order to prove whether language actually “deteriorates”, i.e. whether there is a negative correlation between writing in new media and youth literacy, systematic research is necessary. With that in mind, we approached this research in which students estimated their frequency of using elements of new media language in their writing

assignments in school and in their free time in new media. The present research was conducted using a questionnaire which was used to analyze the following elements of new media language: abbreviations, emoticons, all upper-case letters, all lower-case letters, mixed-case letters, multiple punctuation marks, iconic signs, exclamations and symbols for laughter, phrases without subjects, phrases without auxiliary verbs, aorist and imperfect tense instead of the perfect tense, dialect, anglicisms and vulgarisms.

METHODOLOGY

The aim of this research was to investigate eighth-grade students' estimates of the presence of elements of new media language in their writing assignments in school and for school and in their texts written in their free time with respect to gender and the county they live in.

According to the mentioned aim the following hypotheses were defined:

H1. Students estimate that elements of new media language are significantly more frequently used for writing in new media than in writing assignments in school and for school.

H2. Students estimate that they rarely use elements of new media language in writing assignments in school regardless of gender and county they live in.

H3. Students estimate that they frequently use elements of new media language in their free time and their estimate is independent of gender and county they live in.

The convenience sample of participants comprised 401 students (N = 401) in the eighth grade of primary school in four counties of central and northwest Croatia, i.e. Varaždin County, Međimurje County, Krapina-Zagorje County and Zagreb County. The research was conducted from March to June 2017 after receiving consent from the Ethical committee of the Faculty of Teacher Education, University of Zagreb and parental/guardian consent that their child can participate in the research. The students filled in the questionnaire anonymously and voluntarily. The research was conducted in agreement with the Ethical code of research on children and youth (2003). Students completed the Questionnaire on the use of elements of new media language in written texts during their Croatian language lesson (Filipan-Žigniċ, Legac, Pahiċ, Sobo, 2015). The questionnaire originally comprised 14 items which depict elements of new media language: abbreviations, emoticons, all upper-case letters only, all lower-case letters only, mixed-case letters, multiple punctuation marks, icons, exclamations and other symbols for laughter, phrases without subject, phrases without the auxiliary verb, aorist and imperfect tense instead of the perfect tense, dialect, vulgarisms and anglicisms. The participants had to estimate two aspects: 1) how frequently they use elements of new media language in writing assignments for the subject Croatian language in school or for school purposes, and 2) how frequently they use the mentioned elements of new media language in their free time in new media (*Facebook*, chatrooms, forum, SMS messages, *Viber*, *WhatsApp* and other), using answers from 1 to 5 (1 – never, 2 – rarely, 3 – sometimes, 4 – often, 5 – always).

In this part of the research, the independent variables were gender and county they live in (Table 1).

Table 1. Students' county

County	Frequency	Percentage	Cumulative percentage
Varaždin County	78	19.5	19.5
Međimurje County	116	28.9	48.4
Krapina-Zagorje County	76	19.0	67.3
Zagreb County	131	32.7	100

The dependent variables in the research were the following:

- Eighth-grade students' estimate of the frequency of presence of elements of new media language in their written assignments in school and for school, and
- Eighth-grade students' estimates of the frequency of presence of elements of new media language in their texts written in their free time: on *Facebook*, chat room, forum, SMS, (*Viber*, *WhatsApp*...)

and the correlation between the mentioned independent and dependent variables will be observed.

RESULTS AND DISCUSSION

Inspired by the results of research to date, there emerged a need for research which will provide answers regarding the extent to which young people use new media language when they are in school and in their free time. The answers to these questions were searched for in this research whose results speak of the estimates of use of elements of new media language in texts written in school and for school purposes and texts written in free time through new media with respect to students' gender and county they live in.

Prior to showing the results of more complex analysis of data obtained from the questionnaire, we provide a table with basic descriptive parameters of items and scales used in the research (minimum, maximum, arithmetic mean, standard deviation, asymmetry, kurtosis).

Table 2. Basic descriptive statistical indicators of items in the Scale of elements of new media language in written texts in the subject Croatian language in school and for school purposes and in new media in free time *on a sample of students* (N = 401)

	IN SCHOOL				IN FREE TIME			
	Min	Max	M	sd	Min	Max	M	sd
Mixed case letters (unuTar rijEči i sl.)	1	5	1.19	0.669	1	5	1.68	1.126
Phrases without the auxiliary (ja čuo ti jučer stigla ... i sl.)	1	5	1.42	0.818	1	5	2.14	1.297
vulgarism (j... se, u pm, and similar)	1	5	1.51	1.116	1	5	3.17	1.529
emoticons (☺, ☹ and similar)	1	5	1.70	1.151	1	5	4.11	1.108
Other characters (*****, @@, (((, &&&&, →→, ♥♥ and similar)	1	5	1.72	1.065	1	5	3.20	1.350

abbreviations (btw, lol, fkt, dns, nmg, odg. and similar)	1	5	1.76	1.189	1	5	4.05	1.116
only lower-case letters (marko je bio u zagrebu i sl.)	1	5	1.77	1.238	1	5	3.49	1.380
phrases without a subject (bio kod tebe i sl.)	1	5	1.79	1.016	1	5	2.51	1.375
all upper-case letters (NEĆU DOĆI i sl.)	1	5	1.80	0.986	1	5	2.90	1.216
Multiple punctuation marks (?????; !!!!!, :::::, and similar)	1	5	2.07	1.241	1	5	3.54	1.266
anglicisms (šeram, lajkam, forvardiram, fejs i sl.)	1	5	2.13	1.218	1	5	3.74	1.312
Exclamations and signs for laughter (oooohooo, uuuuuujjj, haaaaahaa, and similar)	1	5	2.14	1.343	1	5	3.99	1.127
dialect (kaj, napravil, plac i sl.)	1	5	2.49	1.347	1	5	4.05	1.216

Legend: Min = minimal value; Max = maximal value; M = arithmetic mean; sd = standard deviation

Table 2 shows that students estimate that they rarely use mixed-case letters within words in their written work and in their written texts in new media in their free time ($M_{\text{school}} = 1.19$, $sd = 0.669$, $M_{\text{new media}} = 1.68$, $sd = 1.126$). In writing assignments in school, according to their estimate, they most frequently use dialect ($M = 2.49$, $sd = 1.347$), and in new media emoticons ($M = 4.11$, $sd = 1.108$). They estimate that in new media they equally frequently use both abbreviations ($M = 4.05$, $sd = 1.116$) and dialect ($M = 4.05$, $sd = 1.216$).

Table 3 shows the results of students' estimates of the presence of elements of new media language in their writing assignments in school and for school and in their free time in new media. It is evident that students generally estimate the presence of elements of new media language in writing assignments for school purposes as low ($M = 1.81$, $sd = 0.750$) or within the framework of the value category *rarely*, and in their free time in new media somewhat higher ($M = 3.28$, $sd = 0.747$), within the framework of the value category *sometimes*. The T- test shows that the differences between these arithmetic means are statistically significant ($t = -30.631$, $df = 400$, $p < 0.001$). That means that we can establish that students estimate that in their free time they use elements of new media language more frequently than in school.

Table 3. Descriptive statistics for the scale of representation of elements of the language of new media on a sample of students (N = 401)

	Min	Max	M	sd	asym.	kurt.
Representation of elements of new media language in writing assignments for Croatian language in school and for school	1	4.54	1.81	0.750	1.25	1.12
Representation of elements of new media language in free time in new media	1	5	3.28	0.47	-0.26	-0.01

Legend: Min = minimal value; Max = maximal value; M = arithmetic mean; sd = standard deviation, asym. = asymmetry; kur. = kurtosis

The results of the conducted analysis of variance for testing differences in students' estimates of the presence of elements of new media language in written assignments for school with respect to gender and county in which they live, showed that there is no difference between male and female students nor between students from different counties, i.e. the obtained differences are not statistically significant ($F_{\text{gender}} = 1.381$, $df = 399$, $p = 0.241$; $F_{\text{county}} = 1.464$, $df = 397$, $p = 0.224$). However, considering Levene's test of homogeneity of variance showed that variance within category variables gender and county statistically significantly differ, i.e. differences within groups are greater than differences between groups ($p < 0.01$), additional non-parametric tests were conducted Mann-Whitney U-test for gender and Kruskal-Wallis for the independent variable county which also confirm the non-existence of statistically significant differences ($p_{\text{gender}} = 0.827$, $p_{\text{county}} = 0.127$).

Testing differences in students' estimates of the presence of elements of new media language in free time through new media with respect to gender and county also showed that the differences were not statistically significant ($F_{\text{gender}} = 1.538$, $df = 399$, $p = 0.216$; $F_{\text{county}} = 2.131$, $df = 397$, $p = 0.096$). Levene's test of homogeneity of variance showed that variance within categories of the independent variable county in which students live are homogeneous ($p > 0,05$), however, for the category gender they differ significantly ($p < 0.01$). As in the previous case, the non-parametric Mann-Whitney U-test was carried out for the independent variable gender which confirmed the insignificance of the statistical difference ($p = 0.182$).

Table 4. Arithmetic means and standard deviations of students' estimates of representation of elements of new media language with respect to student gender (N = 401)

Students' gender	Number of students (N)	In school		In free time	
		Arithmetic mean	Standard deviation	Arithmetic mean	Standard deviation
Male	198	1,85	0.812	3.23	0.818
Female	203	1.76	0.684	3.32	0.670

Table 5. Arithmetic means and standard deviations of students' estimates of the representation of elements of new media language with respect to the county students live in (N = 401)

County	Number of students (N)	In school		In free time	
		Arithmetic mean	Standard deviation	Arithmetic mean	Standard deviation
Varaždin County	78	1,66	0,695	3,39	0,758
Međimurje County	116	1,89	0,914	3,24	0,787
Krapina-Zagorje County	76	1,83	0,652	3,12	0,649
Zagreb County	131	1,80	0,665	3,34	0,748

The results obtained confirm the starting hypothesis that students will estimate that they rarely use elements of new media language in school and for school purposes, and their estimates do not differ with respect to gender and the county they live in.

The findings from students' estimates of the presence of elements of new media language in free time through new media are also in agreement with the initial expectations. Students estimate that they relatively often use elements of new media language in their free time through new media, and their estimates do not differ with respect to gender and the county they live in. These estimates indicate that students know how to write in school and in formal situations, and that the language of new media is almost exclusively used for communication through new media.

Similar to the results from our research, Verheijen (2016) also concludes that deviations from the standard language and traditional writing skills are not caused by writing in new media but are a case of two separate registers of writing which is also why there should not be a lot of concern about the influence of *WhatsApp* on youth literacy. What is more, their results showed that computer mediated communication more positively affects writing skills than negatively (Verheijen, 2017b). Dürscheid et al. (2010) in their project *Schreibkompetenz und neue Medien* conclude that writing in new media does not negatively affect young Swiss persons' literacy. The Dutch research on the influence of language in short written messages on mobile phones on the grammar and executable functions of primary school children confirmed the existence of a positive influence of writing messages on children's grammar as they can improve their grammar ability and they also reject assumptions on language deterioration caused by writing through new media. That tells us that the use and writing of short messages can lead to improvement in children's linguistic awareness and heightened sensibility for language. Conclusions from two English studies carried out by Plester, Wood and Bell (2008) showed that there is not enough evidence that using abbreviations in short messages by 11 and 12 year-old children negatively correlates with their writing language competences, but that there is a significant positive correlation between the proportion of abbreviations that 10 and 11 year-old children use in the practice of translation and orthographic abilities in a standard English text. Plester, Wood and Joshi (2009) found positive correlations between the density of writing short messages and reading, vocabulary and phonological awareness. The subject of youth language as a language variety was approached by Schlobinski (2002) who also points out that writing through new media does not have a negative effect on youth literacy. Only an insignificant number of researches showed negative influences of new media on youth literacy such as research by Tayebinika and Puteha (2012) who found that writing short messages negatively affected their formal writing, speech, grammar skills and orthographic skills, while Rosen et al. (2009) bring forth data that reflect a negative correlation between the use of short messages and informal writing, where the relationships differ with respect to gender and level of education, and particularly affect those who do not have a higher education.

In their research, Filipan-Žigniċ et al. (2015, 2016, 2017) attempted to investigate the actual literacy of youth in Croatia, primarily high school students. Based on the results obtained, they conclude that high school students cannot be considered illiterate as their written assignments in school are written almost exclusively in the standard language, whether in the subject Croatian language or in foreign language subjects. At the same time, their writing in new media abound in deviations from the standard language at the phonological, graphic-stylistic, morphological, syntactic, lexical and hypertextual level, indicating that young persons are aware of the rule that the standard language is required in school regardless of the fact that in new media they use a language that is rich in elements characteristic of new media.

The pilot research carried out by the author of this paper, although on a significantly smaller sample of 56 eighth-grade students, regarding their writing in school and free time in new media (2016, 2017) also established that the majority of eighth-grade students never or rarely use elements of new media language in school writing assignments, while they use the majority of elements of new media language only when they write in new media in their free time.

CONCLUSION

The results of this research confirmed all of the starting hypotheses. The results confirm the initial hypothesis according to which students estimate that they rarely use elements of new media in texts written in school and for school purposes. Their estimates do not differ with respect to gender and the county they live in.

The findings of students' estimates of the presence of elements of new media language in free time in new media are also in agreement with initial assumptions. Students estimate that they relatively frequently use elements of new media language in their free time on *Facebook*, in chat rooms, forums, SMS messages, (*Viber*, *WhatsApp*...) and similar, and their estimates do not differ with respect to gender and the county they live in.

Students estimate that they least frequently use mixed-case letters within words in writing in school and also in written texts in new media in their free time. According to their estimates, they most frequently use dialect in texts written in school, while emoticons are most frequently used in new media. Following emoticons, in new media, they most frequently use abbreviations and dialects which they use equally regularly.

The possible limitations of this research are reflected in the potential misunderstanding of particular items in the questionnaire, i.e. elements of new media language, although explanations for each element were given in the form of an example of that element of new media language. Examples of abbreviations were, for instance, *btw*, *lol*, *fkt*, *dns*, *omg* in order to point out the difference from usual abbreviations such as (*itd.*, *i sl.*, *OS*) which are in agreement with the orthographic norm, as opposed to those which emerged with the use of new media and develop through irregular formation. It was expected that students understand items: aorist and imperfect form instead of perfect, phrases without subjects, phrases without the auxiliary verb and

other, as according to the current Curriculum for Primary School, the mentioned concepts had been learned within the subject Croatian language.

The results of this research, along with other research mentioned in this paper, speak in favor of the claim that writing in new media does not negatively affect youth literacy and that the language of primary school students in their written school work does not deteriorate due to the use of elements of new media language on *Facebook*, in chatrooms, forums, SMS messages, *Viber*, *WhatsApp* and other. However, the limited research with results that indicate a certain negative influence on student literacy, i.e. knowledge of the standard is an incentive for research of youth writing to be investigated in all aspects of their communication. It is hoped that this research will also contribute to that initiative.

Certainly, more accurate results should be expected from research of the texts that students write in school or for school purposes and texts they write in their free time, e.g. with tools of corpus linguistics such as *WordSmith* program for the analysis of texts than merely from students' estimates which the authors have carried out. The results will show whether and to what extent will the eight-grade students' estimates match the analysis of their written work in school and in their free time in new media.

Interesting results could also come from research of the impact of technical solutions in the interface and possibilities of analyzed tools and platforms which, without doubt, to some extent affect the manner of use. This, however, is a possible subject of some future research.

Finally, we would like to emphasize that the results of our research indicate that students know how they have to write in school and in formal situations, while language of new media is used exclusively for communication in new media. That speaks of an obtained level of acquisition of students' communicative competence and such a relationship towards language should be encouraged and promoted. Therefore, the educational system should take advantage of young persons' infatuation with communication through new media and their nearly creative use of elements of new media language in the teaching process, particularly in language teaching. The fact that new media affect communication and that changes are reflected in language must be approached by schools by introducing changes in the curriculum, in teacher education, infrastructure, etc. In that way, teaching becomes directed towards students and their needs and the student becomes an equal subject in the teaching process whose interests are respected. That would create an additional incentive for young persons in their learning and in developing their communicative competence which will enable equal involvement in all language skills. In order for teachers to be able to approach teaching and language teaching in that way, it is necessary that they become familiar with the phenomenon of new media language and all its characteristics. This can be accomplished through various forms of education, e.g. professional development at the county level, workshops, lectures, etc. Finally, we hope that this research and its results will be a step forward in that attempt.

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