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HOW DO YOUNG ADULTS SPEND THEIR TIME ONLINE?

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Nowadays, children and young adults have embraced new information technologies in large numbers. These younger age groups use Internet for many of their daily activities and they do it more than any other age group³. Information and communication technologies (ICT) affect people's everyday lives in so many ways. Mobile phones, tablets, netbooks, laptops and computers are just some of the devices used frequently, often daily, by a large proportion of the population and particularly by young people. So, in this article we will address the issue of young adult's (ages 18 – 25) dependence on gadgets, how do they spend their time online and what their preferences are. The objectives of this paper are: to examine the time spend by the young adults with their tech-devices, to analyze the purpose of following certain sites, to examine what tech-devices they are preferring. The research was conducted to evaluate and to compare the time spend by the young adults with their tech- devices between two countries, Romania and Croatia, in the period from 10 May to 15 May by online survey questionnaire on 136 students from Romania and Croatia.

Key words: *young adults, Internet, information tehnologies, gadgets, preferences.*

1. Introduction

“Technology is the energy that acts as the driving force to drive or to run our lives. It is nothing but the results of the innovations and creativity of human beings. It converts the natural resources into consumer goods which are used by the society and human beings. It has brought the automation level into such a height that human effort and his time has been saved to a great extent. Due to this, the access to information has now become easier and the distant locations are getting closer. IT and communication system has provided such facilities that the world is now feeling like a small globe virtually.”⁴

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³ <https://www.ntia.doc.gov/legacy/ntiahome/dn/html/Chapter5.htm> (accessed, May 12, 2020.)

⁴ Muduli, J. R. (2014). Addiction to technological gadgets and its impact on health and lifestyle: A study on college students (Doctoral dissertation).

Over the past two decades Internet use has increased exponentially. Therefore the large section of the population has easy and affordable access to Internet, in developed and in developing countries.⁵

Since over the past decade, the online communication have become a very important part of young adults lives (e.g., Gemmill & Peterson, 2006; Jones, 2002; Lenhart & Madden, 2007; Subrahmanyam & Greenfield, 2008),⁶ therefore gathering information about how young adults spend their time online is extremely important. Although, it should be emphasized that young adults as Internet users do not behave homogenous, there are differences among gender, and other factors such as experience with the medium (Loges & Jung, 2001) and the importance of one's social surroundings (Hargittai, 2003b) and other.⁷ According to Balhara et al. (2019)⁸ "there is a lack of studies examining various possible correlates of PIU⁹ across different countries..." They emphasise that there is a lack of literature of PIU among young adults, especially the university and college graduate students. According to Hargittai et. al. (2008)¹⁰: "Young adults are much more likely than their older counterparts to be online." Nowadays, children and young adults use Internet for many of their daily activities and they do it more than any other age group.¹¹ Therefore the aim of this paper is to examine the online behavior among young adults and differences in Internet use among young adults (students) in Croatia and Romania.

Various scholars research different issues, particularly cyberbullying and internet addiction. Though the Internet has transformed the way how our world operates today, but it has also served a cyberbullying.¹² Beside mentioned, another issue arise. People's dependence on tech-devices to that extent that "without these, they can't think a step forward in the direction of their growth. The degree of dependency is leading to addiction of the tech-devices and services. Youth is the most vulnerable group among the population to be addicted to technology... The purposes of use in most cases are pleasure driven rather than necessity driven. Again, it reveals that addiction to tech-devices has many negative impacts on the aspects relating to mental health of the respondents and has become a causal factor in the change of life style of young participants."¹³

⁵ Ioannidis et al., 2018 in: Balhara, Y. P. S., Doric, A., Stevanovic, D., Knez, R., Singh, S., Chowdhury, M. R. R., & Arya, S. (2019). Correlates of Problematic Internet Use among college and university students in eight countries: An international cross-sectional study. *Asian Journal of Psychiatry*, 45, 113-120.

⁶ In: Subrahmanyam, K., et.al.. (2008). Online and offline social networks: Use of social networking sites by emerging adults. *Journal of applied developmental psychology*, 29(6), 420-433.

⁷ In: Hargittai, E., & Hinnant, A. (2008). Digital inequality: Differences in young adults' use of the Internet. *Communication research*, 35(5), 602-621.

⁸ Balhara et. Al., op.cit. pp. 114. (Fineberg et. Al., 2018)

⁹ Problematic Internet Use

¹⁰ Hargittai, E., & Hinnant, op.cit. pp. 602.-604.

¹¹ <https://www.ntia.doc.gov/legacy/ntiahome/dn/html/Chapter5.htm> (accesse, May 12, 2020.)

¹² Kowalski, R. M., et.al. (2014). Bullying in the digital age: A critical review and meta-analysis of cyberbullying research among youth. *Psychological bulletin*, 140(4), 1073.

¹³ Muduli, J. R. (2014). Addiction to technological gadgets and its impact on health and lifestyle: A study on college students (Doctoral dissertation).

1.1. Previous research about young adults on the Internet

There are numerous research about different age groups and their use of Internet.

Mihajlov et al. (2017)¹⁴ provides a review of the first twenty years about use of Internet and Internet addiction worldwide. As they highlight: "Internet has become more available, offers more services and its usage is growing in every age group. Approximately 46% of the world population is on the Internet today, an incredible growth compared to only less than 1% in 1995 (Internet Live Stats). The world's most developed countries already have an Internet penetration level over 90%, for example Iceland, 100%, Norway, 98%, Denmark, 96.3%, UK, 92.6%, or Japan, 91.1%, while the highest growth rates are recorded on the African continent in developing countries like Mali, 18.6%, Cameroon, 16.5%, or Côte d'Ivoire, 14.3%. Overall rate in Europe is 73, 5% of and Croatia with 75% of internet users (Internet World Stats 2017)." Furthermore, they highlight actual trends in growing internet use especially among the age group of children and youth.

Hargittai et al. (2008)¹⁵ in their paper examine the online behavior of the age group that is the most connected: young adults. So they limited their focus to this segment of the population, respectively they concentrate on the age group that is the most connected among all Americans.

Internet has become a necessity for all age groups considering: information seeking, easy social connectivity and pleasure, and professional work. Different age group spend their time online differently: "Children use it for learning and play time as most schools used technology for teaching children, young adults use internet usually for reports writing, making presentations, chatting and other leisure activities and older adults' internet for their job purposes."¹⁶

Jun (2017)¹⁷ investigate correlation between internet addiction among different school age groups (kindergarden, elementary school, middle school, high school and university student) and concludes that the higher school age groups are, the higher internet addiction ratio is.

Villanti et al. (2017)¹⁸ investigate Social Media Use and Access to Digital Technology in US Young Adults (aged 18-24). Their main findings are:

- In 2014, 89.42% of young adults reported regular use of at least one social media site.
- This increased to 97.5% of young adults in 2016.
- Among regular users of social media sites in 2016, the top five sites were: Tumblr (85.5%), Vine (84.7%), Snapchat (81.7%), Instagram (80.7%), and LinkedIn (78.9%).

¹⁴ Mihajlov, M., & Vejmelka, L. (2017). Internet addiction: a review of the first twenty years. *Psychiatria Danubina*, 29(3), 260-272.

¹⁵ Hargittai, E., & Hinnant, op.cit. pp. 602.-604.

¹⁶ Gupta, S., Maurya, V. P., Singh, A. P., & Patel, A. K. (2018). Internet Addiction and Quality of Life among Young Adults: An Exploratory Study. *The International Journal of Indian Psychology* ISSN, 2348-5396.

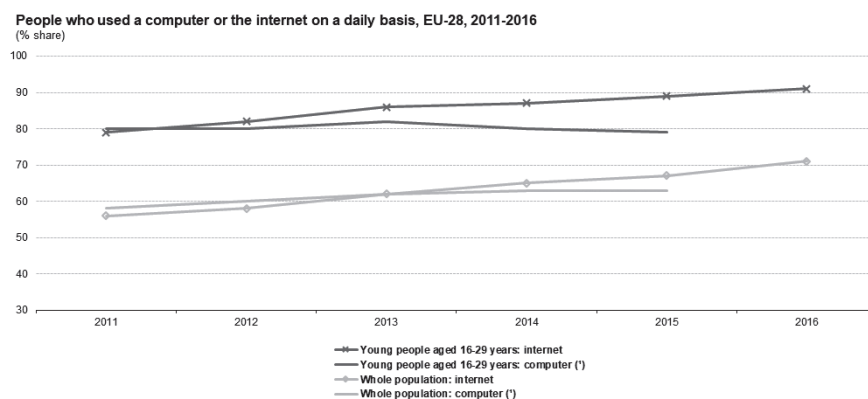
¹⁷ Jun, W. (2017). An analysis work on correlation of internet addiction and school age groups. *Cluster Computing*, 20(1), 879-882.

¹⁸ Villanti, A. C., Johnson, A. L., Ilakkuvan, V., Jacobs, M. A., Graham, A. L., & Rath, J. M. (2017). Social media use and access to digital technology in US young adults in 2016. *Journal of medical Internet research*, 19(6), e196.

- Respondents reported regularly using an average of 7.6 social media sites, with 85% using 6 or more sites regularly.
- 87% of young adults reported access or use of a smartphone with Internet access, 74% a desktop or laptop computer with Internet access, 41% a tablet with Internet access, 29% a smart TV or video game console with Internet access, 11% a cell phone without Internet access, and 3% none of these.
- Access to all digital devices with Internet was lower in those reporting a lower subjective financial situation; there were also significant differences in access to specific digital devices with Internet by race, ethnicity, and education.

According to EUROSTAT research¹⁹ (graphs: 1, 2, 3): “in 23 EU Member States, more than four out of every five young people (aged 16–29) used a computer on a daily basis. The highest rates of daily computer use among young people were recorded in Estonia (93%), Latvia (91%), Lithuania (90%), the Czech Republic and Slovenia (both 89%). In contrast, the lowest proportion of young people making daily use of a computer was recorded in Romania (62%). Poland, Portugal, Lithuania, Greece, Slovenia, Bulgaria, Latvia, the Czech Republic, Romania, Cyprus, Malta, Croatia all recorded rates for the daily use of computers among young people that were at least 25 percentage points higher than for the whole population. A relatively high proportion of Croatia’s young people had experience in programming. A slightly higher proportion of young people (than the whole population) carried out civic activities online while a much higher proportion of young people (than the whole population) made use of social networks.”

Graph 1 People who used a computer or the internet on a daily basis in EU-28 (2011.-2016.)



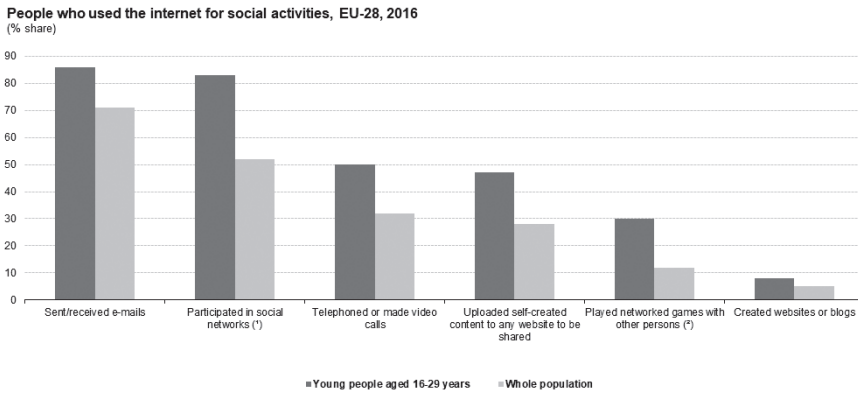
(*) 2016: not available.
Source: Eurostat (online data codes: isoc_ci_fip_fu and isoc_ci_dfp_fu)

eurostat

Source: https://ec.europa.eu/eurostat/statistics-explained/index.php/Being_young_in_Europe_today_-_digital_world

¹⁹ Being young in Europe today, EUROSTAT Statistical books, 2015. available at: <https://ec.europa.eu/eurostat/documents/3217494/6776245/KS-05-14-031-EN-N.pdf/18bee6f0-c181-457d-ba82-d77b314456b9> (16.05.2020.)

Graph 2 People who used the internet for social activities in EU-28 (2011.-2016.)

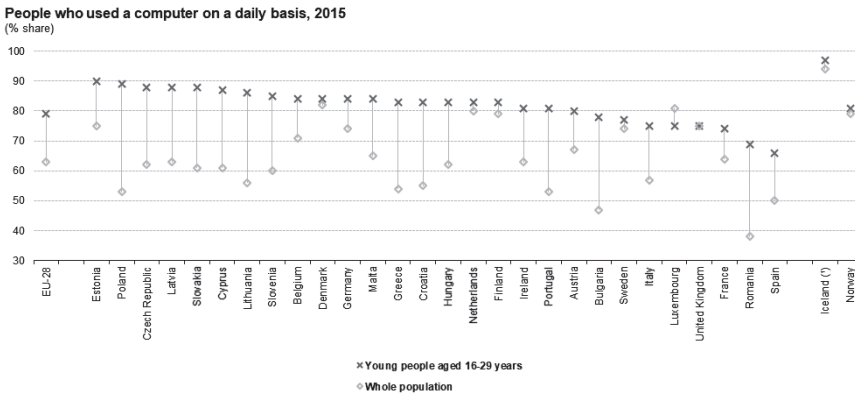


Note: respondents carried out the task during the 3-month period prior to the survey.
 (*) For example, created a user profile, posted messages or other contributions. Social networks include, for example, Facebook and Twitter.
 (*) 2014.
 Source: Eurostat (online data code: isoc_ci_ac_i)

eurostat

Source: [https://ec.europa.eu/eurostat/statistics-explained/index.php?title=File:People_who_used_the_internet_for_social_activities,_EU-28,_2016_\(%25_share\)_BYIE18.png](https://ec.europa.eu/eurostat/statistics-explained/index.php?title=File:People_who_used_the_internet_for_social_activities,_EU-28,_2016_(%25_share)_BYIE18.png)

Graph 3 People who used a computer on a daily basis, 2015.



(*) 2014.
 Source: Eurostat (online data code: isoc_ci_cfp_fu)

eurostat

Source: [https://ec.europa.eu/eurostat/statistics-explained/index.php?title=File:People_who_used_a_computer_on_a_daily_basis,_2015_\(%25_share\)_BYIE18.png](https://ec.europa.eu/eurostat/statistics-explained/index.php?title=File:People_who_used_a_computer_on_a_daily_basis,_2015_(%25_share)_BYIE18.png)

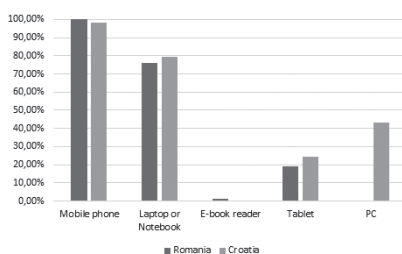
According to the Pew Research Center, the most popular social media platforms among young adults from 18 to 24 year old in America are: YouTube (94%), Snapchat (78%), Instagram (71%), Facebook (68%), and Twitter (45%). Furthermore, research shows that 93% of teens ages 12 to 17 go online, 93% of young adults ages 18 to 29, and 74% of all adults ages

18 and older go online. These two groups, teenagers and young adults, are constantly growing online even though other age groups are growing (e.g. adults 65 and older).²⁰

2. Findings

The study included a convenience sample of 136 young adults: 79 from Romania and 57 from Croatia (aged from 18 to 25, female gender 62% in Romania, 68% in Croatia; male gender: 38% in Romania, 32% in Croatia)²¹ attending university school (Polytechnic study in Šibenik – Croatia, and University “Dunarea de Jos” Galati in Romania). Young adults were asked to complete an anonymous questionnaire and provide data on age, gender, country of residence, and Internet use. The questionnaire was developed in Google Forms format and sent to students in an electronic form (in the period from 10 May to 15 May) along with instructions and contact information of the researchers. The main aim of the research was to reveal for which purpose and how often the young adults use digital devices, and to found out are there differences between two countries.

Graph 4 Tech-devices owned by respondents



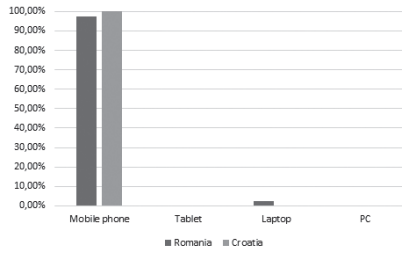
Source: authors

Respondents were asked to indicate which tech-devices they have (graph 4). Mobile phone is most owned tech-device (100% in Romania and 98% in Croatia) followed by Laptop or Notebook (77% in Romania and 79% in Croatia). Other tech-devices like Tablet (19% in Romania, 24% in Croatia), PC (0% in Romania but 41% in Croatia) and e-book reader (0,1% in Romania, 0% in Croatia), are less represented. Here we observed clear difference regarding PC ownership.

²⁰ <https://www.pewresearch.org/millennials/teen-internet-use-graphic/> (accessed May 16, 2020.)

²¹ That represent 0,014% of population of that age group in Croatia and 0.0048% in Romania. According to statistic data available on www.dzs.hr in Croatia there is 212 411 man gender and 203 407 woman gender in the age group from 18 to 25 that makes 51% of man population and 49% of woman population in that age group and they make 10% of total population in Croatia. According to statistic data available on <https://ec.europa.eu/> in Romania there is 840 700 man gender and 798 352 woman gender in the age group from 18 to 25 that makes 51% of man population and 49% of woman population in that age group and they make 8% of total population in Romania.

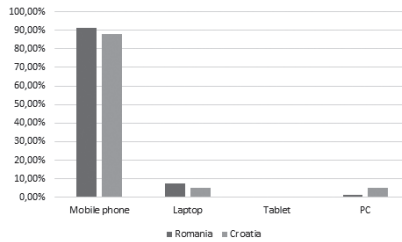
Graph 5 Preferred device for communication



Source: authors

In both countries almost all young adults prefer the mobile phone to communicate (98% in Romania, 100% in Croatia).

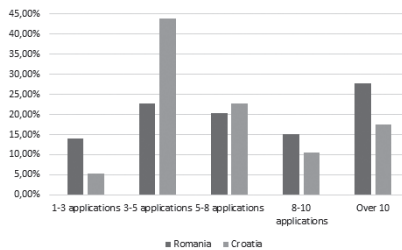
Graph 6 Most often used device to connect to the Internet



Source: authors

To connect and surf the Internet, 91% of young adults in Romania and 89% in Croatia prefer to use a mobile phone, and only a small number of respondents prefer PCs (1% in Romania, 5% in Croatia) or laptops (8% in Romania, 6% in Croatia) (graph 6).

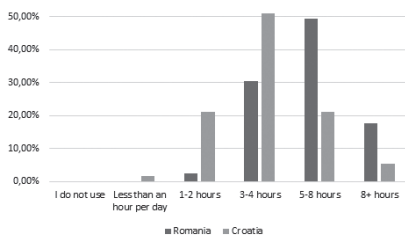
Graph 7 Number of applications used on mobile device



Source: authors

Due to the graph 7 most young adults respondent in Romania have over 10 applications (28%) while in Croatia most of them have 3 to 5 applications (44%). That is a notable difference and could be an important indicator that should be further investigate.

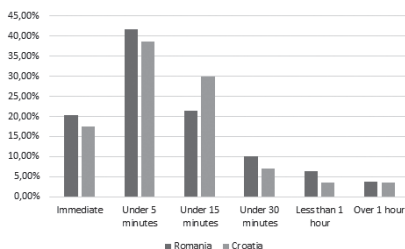
Graph 8 Daily time spend on mobile devices



Source: authors

According to graph 8 there is a clear difference between compared countries. Young adults in Romania spend more time using mobile devices, 49% of them spend from 5 to 8 hours (in Croatia 21%, that is more than a half lower) and 18% more than 5 hours (in Croatia 5%, that is almost four time less) a day on mobile devices. Observed together, 67% of them is more than a 5 hours on mobile phone daily, while in Croatia that makes 26% (or 2,5 time less). However, most of them in Croatia (51%) is from 3 to 4 hours daily on the mobile phone. It is also very significant that “less than an hour per day” non of respondents from Romania didn’t answer.

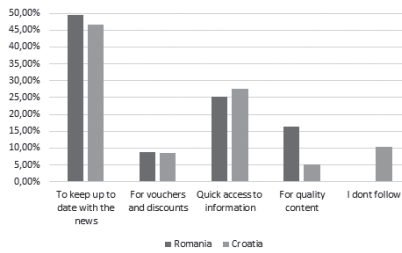
Graph 9 Time between waking up and taking mobile device



Source: authors

Due to the data from graph 9 it is obvious that in both countries almost 60% of young adults use their mobile phone in less than 5 minutes after waking up or even immediately (Immediate: 20% in Romania, 17% in Croatia; Under 5 minutes: 42% in Romania, 39% in Croatia). This indicates that today’s young adults are closely linked to their mobile phones.

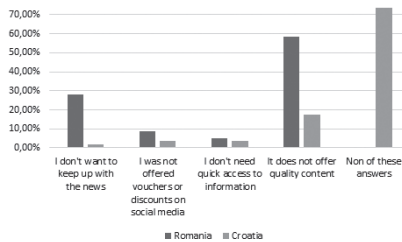
Graph 10 Reasons for following some web pages and brands on social media using mobile device



Source: authors

The graph above indicate that young adults follow brands and pages on social media primarily to keep up to date with news (49,8% in Romania and 47,8% in Croatia) and to have quick access to information (25% in Romania and 28,2% in Croatia), but, quality content (16,2% in Romania, 5% in Croatia) and discounts/vouchers (9% in both countries) are not a great incentive for them to follow their pages. According to graph 10 we can conclude that there is a difference between countries where for 16,2% Romanian respondents quality content is more important than to Croatian respondents (4%) and 10% of Croatian respondents don't follow any page while all Romanian respondents follow some pages.

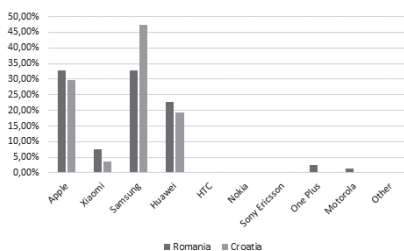
Graph 11 Reasons for not following some web pages and brands on social media using mobile device



Source: authors

According to graph 11 there are differences between countries. Young adults in Romania would not follow brands on social networks if they did not provide quality content (58%) and another important reason would be that they do not want to be up to date with brand news (28%), but most young people in Croatia have some other reasons not to follow the brands on social networks (71%).

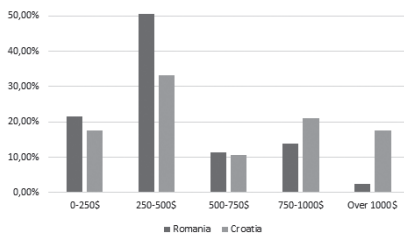
Graph 12 Favorite mobile phone brand



Source: authors

According to graph 12 it is clear that in both countries young people prefer the big giants of the mobile phone industry, namely Samsung, Apple and Huawei. Apple enjoys the sympathy of about 30% of the respondents from both countries (33% in Romania and 29% in Croatia). Therefore, Croatian respondent prefer Samsung (46%), while respondent from Romania prefere Apple and Samsung equally (33%).

Graph 13 The price of mobile phone



Source: authors

Due to the graph 13, Romanian young adults have cheaper mobile phones, resulting from the fact that 72% of them have phones cheaper than \$ 500, but the situation differs in Croatia, because 48% of them have mobile phones more expensive than 500 \$. However, in both countries most of young adults have mobile phones in price range from 250 to 500 \$ (50,5% in Romania and 33% in Croatia). While in Croatia 18% young adults have mobile phone that cost more than 1000 \$ in Romania only 3%.

3. Conclusion

Because on the rapid development of today's technology, there are several advantages and disadvantages for people. Nowadays young adults have constant access to many different forms of media through television, mobile phones, movies, music, video games, and the Internet. In this research we found out that there is a growing trend of a internet use among young adults where mobile devices become an indispensable thing in daily lives.

Main finding is that mobile phone is the main device for communication and for internet connection. More than a half respondenst from both countries have more than a 3

application on mobile device and they spend more than a 3 hours a day on mobile device while they took their mobile device almost momentarily after they wake up. Following our research we can conclude that our findings are quite similar to previous research, also we conclude that there are differences between young adults in two compared Countries (Croatia and Romania) but there are also similarities.

➤ Differences:

- Regarding ownership on tech-devices there is a clear difference about PC. In Romania none respondent doesn't have PC while in Croatia 41% own PS.
- Young adults in Romania spend more time using mobile devices than young adults in Croatia.
- There is a difference between countries according reasons for following some brands. For Romanian respondents quality content is more important than to Croatian respondents.
- Also there are differences between countries according to reasons for not following some brand. Respondent from Romania would not follow brands on social networks if they did not provide quality content (58%) but most Croatian respondents have other reasons not to follow the brands on social networks.
- Respondents from Romania have more applications on mobile phones and they have cheaper mobile phones than respondents from Croatia.

➤ Similarities:

- In both countries almost 60% of young adults use their mobile phone in less than 5 minutes after waking up or even immediately.
- Also in both countries almost all young adults prefer the mobile phone to communicate and to surf the Internet, just as in other research that were mentioned.
- Young adults follow brands and pages on social media primarily to keep up to date with news and to have quick access to information, which coincides with other research that were mentioned.
- In both countries young people prefer the big giants of the mobile phone industry, namely Samsung, Apple and Huawei.

This research is starting point for analyzing how do young adults spend their time online. Findings about this issue are very important due to growing problems connected to online addiction in this population as we mentioned in introduction of this paper. Considering the above we would like to encourage more extensive and continuous research on this issue.

Given the relatively low response rate and small sample, we have to be cautious about generalizing too far from our sample. It would be recommended for future research to include higher number of respondents and to include different age groups in order to identify differences between them. Beside mentioned, according to present findings about increasing use of the Internet worldwide and among all age groups, scholars should move Internet research to a multifaceted concept that includes: attitudes, skills, depth and width of Internet use.

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Sažetak

KAKO MLADI LJUDI PROVODE VRIJEME ONLINE?

Mlađa populacija ljudi (djeca i adolescenti) danas su prigrlili nove informacijske tehnologije u velikom broju. Navedena populacija koristi Internet za svoje mnogobrojne dnevne aktivnosti te to rade više od svih drugih dobnih skupina. Informacijske i komunikacijske tehnologije utječu na živote ljudi na mnogo različitih načina. Mobiteli, tableti, netbook, prijenosna računala i sl. samo su neki od uređaja koje veliki dio populacije svakodnevno koristi, a pogotovo mladi ljudi. Stoga se ovaj rad bavi problematikom vezanom za mlade ljude (u dobnj skupini od 18 do 25 godina) i njihovom povezanošću sa informacijskim i komunikacijskim tehnologijama, odnosno kako provode svoje vrijeme online te koje su im preferencije posebice u pogledu informacijskih uređaja koje koriste. Ciljevi rada su: istražiti koliko vremena provode na svojim uređajima, razloge zbog kojih prate određene stranice te koje tehnološke uređaje preferiraju. U tu svrhu provedeno je istraživanje kako bi se usporedile dvije skupine mladih ljudi, jednu skupinu čine mladi ljudi iz Rumunjske dok drugu skupinu čine mladi ljudi iz Hrvatske. Istraživanje je provedeno u period od 10. do 15. svibnja putem online anketnog upitnika na uzorku od 136 studenata.

Ključne riječi: mladi ljudi, Internet, informacijske tehnologije, uređaji, preferencije.

