

## MEDIA USE AMONG YOUNG PEOPLE IN SERBIA<sup>2</sup>

### Upotreba medija među mladima u Srbiji

**ABSTRACT** *The aim of this paper is to present how the electronic and print media have been used among the youth in Serbia. The analysis aims to show diverse modes of media usage in relation to the demographic and socio-economic characteristics of the youth, on the assumption that age, sex, residence, education, occupation, etc. influence the choice of media, the contents that young people prefer, as well as the amount of time spent on their usage. The issue that prompted our attention most is access to different types of media (print, television and internet) because the media also represent one of the key preconditions of social participation.*

**KEY WORDS** *print media, television, internet, youth, information society*

**APSTRAKT** *Cilj rada je da pokaže kako su štampani i elektronski mediji korišćeni među mladima u Srbiji. Analizom ćemo pokušati da prikažemo različite modalitete korišćenja medija u odnosu na demografske i socioekonomske osobine mladih, sa pretpostavkom da godine, pol, mesto stanovanja, obrazovanje, zanimanje, i dr. utiču na izbor medija, sadržaje koje mladi preferiraju, kao i količinu vremena koju posvećuju konzumaciji istih. Pitanje koje je najviše potaklo našu pažnju je mogućnost pristupa različitim vrstama medija – štampi, televiziji i internetu – jer mediji predstavljaju i jednu od ključnih pretpostavki društvene participacije.*

**KLJUČNE REČI** *štampani mediji, televizija, internet, mladi, informaciono društvo*

Our aim is to use this work to examine the relationship between young people in Serbia and the media. The issue that prompted our attention most is access to different types of media – print, television and internet – because the media also represent one of the key preconditions of social participation. To be informed presumes social action as “the reflexivity of modern social life consists in the fact

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<sup>2</sup> This paper is the part of the project “Challenges of the new social integration in Serbia: Concepts and actors”, funded by the Ministry of Education and Science of the Republic of Serbia. The research was carried out within the framework of the Regional Research Promotion Programme in the Western Balkans (RRPP), which is run by the University of Fribourg upon a mandate of the Swiss Agency for Development and Cooperation, SDC, Federal Department of Foreign Affairs. The views expressed in the paper are those of the authors and do not necessarily represent opinions of the SDC and the University of Fribourg.

that social practices are constantly examined and reformed in the light of incoming information about those very practices, thus constitutively altering their character” (Giddens, 1996: 38). The first aim is to examine the extent to which access to the media and its contents that are used depend on socio-demographic indicators – education, place of residence, gender, age, occupation, income. The second aim is to explore a special kind of media exclusion – digital divide, which occurs in the field of ICT. Previous research (Milovanović, 2005, Goločevski 2003, Petrović 2006, Sitarski, Milovanovic, 2007, Petrović 2009), as well as standardized surveys of the Statistical Office of Serbia carried out over the past few years, indicate that the use of certain media is distributed unevenly among the aforementioned groups.

### **Information as the trigger for social agency**

The changes that have taken place in terms of the development of new communication technology have significantly influenced the functioning of all spheres of society. Although the authors following the perceived changes have somewhat differing views regarding the extent of transformation of society through this process, there is no doubt that they agree that the development of ICT has most radically changed our ways of communicating (Bell, 1973; Castells, 2000; Giddens, 1996).

Considering our relationship with information, the youth and the society are interested in the context of the broadest perceived preconditions assumptions of social participation, or ways to empower the youth “in the field of communicative and socio-political autonomy” (Cardoso, 2006: 127), it seems that the most comprehensive way of classifying the media (Tehraniyan, 1999, cf. Cardoso, 2006: 127) is into the *macro, mid and micro* media. At the highest level, macro-media – which comprises satellite television, international radio stations and the internet – represent agents of globalization that lead to an ever increasing exchange and networking of national economies and markets, political systems, societies and cultures. Stakeholders on this level are international media agencies, multinational companies, state blocs and the like. At the mid-level, there are newspapers, film, national television and radio. Stakeholders on this level are countries and various interest groups, while this media type most commonly has a dual function: social *integration and mobilization*. The third, micro level includes far more direct relations in the mediation of information – which comprises audio and video material transmitted through digital carriers, personal computers, the internet – that “*have primarily empowered the centrifugal forces of dissent at the peripheries of power*” (Cardoso, 2006: 128).

While the first two forms of media entail the centralized management of information and very limited possibilities of participation regarding the content (such as articles in newspapers – readers' letters and the like – and TV's inclusion in

programming and SMS), the third one is extremely open to creating and sharing content. The first two have the primary function of transmitting information and the third represents a genuine framework for communication (Petković, 2007: 108).<sup>3</sup>

The most significant difference between the old (print and TV) and new media is the direction of communication. The significance of the internet has been shown to lie not only in the possibility of disseminating information, but rather in its hybrid role, because it combines print, television, radio, advertisements, telephone; providing an opportunity for individuals' performances through social network pages. Before the internet, no single media had such a possibility of meeting and exchanging between users (Petrović, 2009: 24-27).

ICT leads to a higher level of audience inclusion in producing and disseminating information, which leads to the democratization of the public space, but also to certain risks and requirements of special knowledge for the purpose of getting authentic and truthful information. Moreover, ICT leads to change in terms of the importance of space and time in communicating, because it is possible to communicate with persons across the entire planet (Petković, 2007: 104).

The Internet has two significant characteristics: openness and the ability to create networks. The first relates to the ability of everyone to participate through creating, sharing information, and the second refers to the potential for creating more or less cohesive communities/groups – whether these groups are geographically distant or already existing “place-based community networks” through which the potential for collective action is increased (Servon, 2002: 3).

One of the most important issues related to the new media is a *digital divide*. This term signifies an unequal access to information technologies, both between countries and within them. Research that followed this phenomenon noted that people who most commonly utilize ICT are male, well educated, young and urban. ICT influences significantly what we do and how we work, with whom we are connected, how we make decisions and on the basis of which available information (Servon, 2002: 2). The digital divide is simultaneously both a consequence and a cause of already existing inequities, as those who are wealthier fare better at the start of the information race, and thus during the development of these technologies there emerges an increase in already existing differences.

National surveys have confirmed on several occasions the thesis about the existence of a digital divide (2007, 2005, RZZS). In this research, it was noted that gender, age, place of residence, level of education and material standard represent the basis underlying the divide.

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<sup>3</sup> The quick and complete penetration of television as a medium, as well as its setting as the main substitute for other media, Castells interprets the possibility of using other media as a kind of sociological necessity, which is determined by hard work and fatigue that mark the leisure and cultural deprivation demanded by other media (such as books, newspapers, theatres, etc.) (Castells, 2000: 359).

Delayed and late post-socialist transformation has caused a delayed beginning of changes on the media scene. The new media were the latest to appear, which is why they are the least widely used. In Serbia, the pace of substitution of the old media by new media forms is the slowest among the neighboring countries and the European Union. However, this situation raises not only the issue of the existence of a gap between Serbia and other countries in the region and the EU, but also the issue of the information divide within the country. Since the focus here is on the young people, who are at the same time the main participants in the changes taking place in this area, the impossibility of media participation necessitates examination of other forms of social exclusion.

If we compare the share of young people in Serbia who do not watch television and young people in the region and the rest of Europe, the differences do not seem large. In Serbia, 4.7% of the youth in the age group 19-35 (ISR 2001) do not watch television, while in the other countries the percentages are as follows: Slovenia 7.5%; Bulgaria 5%; Hungary 6.2%; Poland 8.3%; Germany 8.5%; France 7.4% etc. (ESS 2010). However, more significant differences appear if we compare the time spent watching television. The Serbian population is ranked (316 min/day) at the top of the list in this regard among European countries. Serbia is followed by Macedonia (293 min/day), Croatia (269 min/day), Romania (257 min/day), Poland (245 min/day), Slovenia (192 min/day) and EU26 (228 min/day) (Mediametre, 2011). It is evident that the population of European countries that are more economically developed dedicates on average slightly less time to watching television.<sup>4</sup> Since these countries also have higher-quality access to the Internet and their population spends more time on the web, the substitution of the old by the new media is to be expected.<sup>5</sup>

According to all significant indicators of ICT usage, Serbia is one of the least developed countries in Europe. EUROSTAT data for 2010 show that the percentage of Serbian households with access to the Internet (39%) places the country on one of the lowest ranking positions on the list, while some of the other countries have the following percentages: Macedonia 46%; Croatia 56%; Slovenia 68%; EU27 70%. The situation is similar if compare the percentage of broadband internet access. With 28% of broadband links, Serbia is ahead of Romania (26%) and Bulgaria (23%), but ranks after all other Yugoslav successor states ex-Yugoslavian republics, like Macedonia (37%), Croatia (49%) and Slovenia (62%), and EU27 (61%). As regards internet usage in the last 12 months, Serbia (with 44% of the population using the Internet in the last year) is positioned better than Romania (40%), but worse than Macedonia (54%), Croatia (57%), Slovenia (70%) and EU27 (71%). Examining the young segment of the population (age groups 15-24 and 25-34, see Table 1 in

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<sup>4</sup> The UK is an exception.

<sup>5</sup> When it comes to the time spent reading newspapers, we do not have indicators comparable with other countries in the region and the rest of Europe.

Apendix), we noticed that the situation is identical to the rest of the population. Although the young people in Serbia are the true agents of change in the ICT field (they are the ones who use the Internet the most, as well as mobile devices etc., in comparison with the rest of the population), they rank lower in this regard than their counterparts in all other Yugoslav successor states former Yugoslavian republics, as well as the age group 15-24 in all EU countries.

Our data and analysis are based on a comprehensive survey which was carried out on a national representative sample of 1627 young people aged 19 to 35 in March and April 2011 (with quotas set for four age cohorts 19/20, 24/25, 29/30, and 34/35).

### **Young people in front of TV**

Television has proven to be the most widespread medium among Serbia's population. According to RZZS statistics, almost every household in Serbia has a television set (95.6% - 2006; 98.9% - 2011<sup>6</sup>). When it comes to the extent to which this medium is monitored, high levels of participation are also observed among young people. A total of only four percent of young people do not regularly watch television programmes. There are no statistically significant differences between key socio-demographic groups in terms of monitoring this medium, or rather the time spent in front of the television set. However, some differences do occur in terms of the type of a show that young people prefer (Table 1). Statistically significant correlations appear on this level between informative, political, educational and reality shows and all socio-demographic categories. Specifically, there is a correlation of informative, political and educational programmes: with the level of education – higher levels of education equate to a greater likelihood of watching such broadcasts; with the size of town – people from smaller towns are less likely to watch these programmes<sup>7</sup>, with the lowest percentages in rural areas; with age - the older the viewer, the greater the interest in these topics. As expected, there is a similar correlation between these types of broadcasts and the level of income, as those with higher level of education most commonly watch TV and have better paid jobs. On the other hand, correlation occurs between reality shows, which are more prevalent among those with lower education and more so in smaller towns and rural areas, among young people with lower incomes and even more among younger categories.

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<sup>6</sup> *Use of ICT in the Republic of Serbia*, series of publications - 2006-2011.

<sup>7</sup> Although the degree of correlation is quite low, it is interesting that the ratings of informative programmes are 42% in Belgrade and 30% in villages, political shows are watched by 15.8% in Belgrade and 7.6% in villages, educational programmes attract 27% in Belgrade and 17% in villages, while reality shows are viewed by 7.2% in Belgrade and in 17.6% of cases in villages.

**Table 1 Correlations – Types of a TV show and socio-demographic variables**

	informative	political	entertainment	educational	movie	reality show	series	music	sports
Size of a settlement	.12**	.017*	-.085*	-.1**	-.03	-.21*	-.041*	-.022	-.11*
Education	.241**	.111*	-.052	.206**	.046	-.201**	-.069	-.083**	-.02
Age	.105**	.061*	-.024	.102**	.010	-.095**	-.043	-.122**	.037
Incomes	.160**	.094**	.002	.091**	.018	-.129**	-.092**	-.071**	.012

\*p<.05; \*\*p<.001

If we compare the results with the research carried out in 2003<sup>8</sup> (Table 2), we will see that although there were no significant differences in terms of the time devoted to watching television, significant differences occurred among the groups in terms of preference for the type of television show. Because of these observed differences in the type of samples in the two research studies, we compared the relevant groups - quota. Interestingly, during the eight-year period there has been an increase in the interest in social and political issues among young people.

**Table 2 Types of a TV show in two surveys**

%	informative	political	entertainment	educational	movies	series	music	sport
students 2003	15.4	5.4	38.4	19.3	67	28.8	34.6	36.7
students 2011	35.3	12.7	36.3	26.9	49	23.1	32.6	27.4
unemployed 2003	16.2	4.9	34.8	11.3	61.7	34.4	31	32.6
unemployed 2011	21.2	6.1	44.9	16.8	51	31.7	36.4	30.3
employment 2003	30.6	9	31.1	14.6	54.4	23.2	23.5	38.5
employment 2011	31.3	10.9	41.7	21.2	45.6	20.9	26.3	34.7

Students have a significantly greater tendency to watch informative, political and educational programmes and, to a lesser extent, films, series and sport programmes. Changes occurred among the unemployed in the sense that they watched more entertainment shows and fewer films. In the meantime, young employed people have begun to watch entertainment and educational programmes to a somewhat higher degree than before. There are no statistically significant differences in the eight-year period for other types of broadcasts. Indeed, a significant shift in the type of show watched by young people only took place among the student population. The reason may be found in the changes that have occurred in the education system, but perhaps also in a greater interest in social and political issues among the "post-5<sup>th</sup> October" generation. Another explanation may

<sup>8</sup> Because of significant differences in the sample design in two surveys, when we compare data we will present comparisons between the three relevant groups (the employed, the unemployed and students). The first one was (2003) based on quotas formed according to activity status (one quarter of secondary school students, university students, the employed and the unemployed) of young people. The second one (2011) was a simple random sample within the chosen age cohort. Only comparable data about the media is time spent in watching television and shows which they prefer.

be an increase in the general level of information provision (via the Internet, daily newspapers, magazines, free publications) and the need for networking, which leads to the demands for familiarity with social issues, especially in the case of youngsters who are in the education process.

## Reading habits

In this section of the paper we will address the topic of differences among the key sociological groups in terms of spending time reading newspapers. We begin with the fact that the newspapers (daily, weekly, monthly), as print media, demand several important sociological preconditions when being used. The first is a certain level of cultural capital, because, unlike television, newspapers require a higher degree of cognitive involvement and understanding. The second is a certain level of material wealth, which involves the possibility of buying newspapers regularly. Through statistical tests we also confirmed that only the level of education and material standard of a household have a significant impact on the time that young people devote to reading newspapers. Neither gender, nor place of residence, nor occupation show significant differences between the groups. However, further differences emerge when we compare those who (do not) read daily and weekly newspapers.

Education shows the strongest connection with the time devoted to reading newspapers (Table 3). We tested the differences between groups as regards the educational level, and we found indicators of a statistically significant difference between those with (in)complete primary education and all others.<sup>9</sup> If we look at those who never read newspapers, we see that the percentage falls into line with the educational level.

<sup>9</sup> Through Kruskal-Wallis Test we revealed a statistically significant difference in newspaper reading across five different educational groups ((in)complete primary school n=119, lower vocational n=250, high school n=444, college/university n=305 and students n=396)  $\chi^2(4, n=1514) = 50.39, p < .001$ . Those with (in)complete primary education recorded lowest median score (Md=2), those with high school recorded a higher median score (Md=4) while all others have same median score (Md=3). In order to compare the differences between groups we conducted six Mann-Whitney U Tests. Tests were made whenever we had assumptions of significant difference. Although we made multiple comparisons we applied Bonferroni adjustment which reduced the alpha value to 0.008 for this analysis.

Mann-Whitney U Test	Lower vocational	High school	Students	College/University
(In)complete primary school	U=11336, z=-3.81, p<.001, r=.2	U=16687, z=-6.39, p<.001, r=.27	U=16754.5, z=-4.91, p<.001, r=.22	U=11398, z=-6.15, p<.001, r=.3
College/University	U=33381, z=-2.62, p=0.009, r=.11	U=66077, z=-.59, p=.56		

**Table 3 Reading newspaper and educational level**

	Reading newspaper						Total
	Never	Monthly	Once a week	Several times a week	One hour a day	1-3 hours a day	
<b>Education</b>							
(in)complete primary school	37.0	9.2	6.7	26.1	19.3	1.7	100.0%
lower vocational	22.8	4.0	10.4	24.0	32.8	6.0	100.0%
high school	16.2	4.1	9.5	19.1	40.8	10.4	100.0%
college/university students	11.8	6.2	10.5	24.3	40.0	7.2	100.0%
	16.4	7.3	12.6	23.0	32.1	8.6	100.0%
<b>Total</b>	18.1	5.7	10.4	22.5	35.3	7.9	100.0%

The next level demonstrating a connection with the time devoted to reading newspapers is the financial or material standard, measured in terms of income per capita of household and self-perception of financial status. Table 4 shows that people at the bottom of the income scale are those who most commonly never read newspapers. A similar situation exists in terms of self-perception of financial status. Specifically, approximately half of those who believe they do not have enough money for food tend not to read newspapers ever. As one moves towards higher material standard, this proportion declines (around a quarter of those who have enough money for food but not for clothing, to one tenth of those who are able to buy whatever they want). A Kruskal-Wallis Test was used to investigate the impact of a level of income per head of a household and a level of newspaper reading.<sup>10</sup> Post hoc tests showed that significant differences between groups occur among those with the lowest income per head of a household and others. It is also interesting that the reading newspaper increases up to the average income only to experience a slight decline afterwards. The explanation is that this represents a kind of compensation for the media information among those with higher incomes (who often make use of the Internet, as we shall see later).

<sup>10</sup> Through Kruskal-Wallis Test we revealed a statistically significant difference in newspaper reading across five different income groups (-80EUR n=241 81-160 EUR n=458, 161-240 EUR n=264, 241-320 EUR n=174 and 321+ n=223)  $\chi^2(4, n=1390) = 32.9, p < .001$ . Those with 241-320 EUR income per household capita have highest median score (Md=4), while all others have same median score (Md=3). As there were multiple comparisons made (six comparisons of lowest and highest income of household per capita) Bonferroni adjustment reduced the alpha value to 0.008.

Mann-Whitney U Tests	81-160 EUR	161-240 EUR	241-320 EUR	321+
-80 EUR	U=52186, z=-3.7, p<.001, r=.14	U=26830, z=-5.14, p<.001, r=.22	U=18129, z=-4.22, p<.001, r=.2	U=24145, z=-3.95, p<.001, r=.18
321+	U=49022.5, z=-.88, p=.38	U=28155, z=-.86, p=.39		



**Table 4 Reading newspaper and income of household per capita**

EUR	Reading newspaper						Total
	Never	Monthly	Once a week	Several times a week	One hour a day	1-3 hours a day	
-80	28.4	6.6	12.9	23.6	21.8	6.6	100.0
81-160	19.2	5.5	10.9	22.7	34.7	7.0	100.0
161-240	12.1	5.3	9.1	28.0	37.9	7.6	100.0
241-320	17.2	5.2	10.9	15.5	40.8	10.3	100.0
321+	16.1	4.5	12.1	22.9	37.2	7.2	100.0
<b>Total</b>	19.0	5.5	11.1	23.0	34.0	7.5	100.0

Significant correlations between topics in newspapers and magazines and the following socio-demographic variables appear as follows (Table 5): the larger the place of residence, the less interest in sports and show business and the more interest in the society, global affairs and culture. Higher level of education means an increasing interest in the society and global affairs, culture and health rather than in sports, entertainment and showbiz. Growing up correlates with the increase in the interest in society, world affairs and culture, while younger people are interested more in sports and showbiz. Along with the increase in income, there is a greater familiarity with developments in society, world and culture, and the less the income, the more interest in sports and showbiz.

**Table 5 Correlations – Types of newspaper topics and socio-demographic variables**

	Sport	social affairs	entertainment	Health	fashion	showbiz	global affairs	Culture
Size of a settlement	-.1*	.1**	-.084	.025	-.02	-.11*	.09**	.25**
Education	-.058*	.14**	-.073*	.082**	.044	-.178**	.173**	.216**
Age	-.016	.138**	-.081**	.073**	-.05	-.093**	-.014	-.02
Incomes	.032	.137**	-.007	-.004	.026	-.113**	.107**	.084*

\*p<.05; \*\*p<.001

### Internet use among young people

According to the 2011<sup>11</sup> data of the Statistical Office of the Republic of Serbia, 52% of households own a computer (with a significant difference of 61% in cities compared to 39% in rural areas). Also 41% of them have Internet connection (27.2% in rural areas, 51% in cities). The majority of households with monthly income of more than 600 Euros have Internet connection (83.8%), while only 25,9% of households with monthly income of up to 300 Euros have Internet connection. These data refer to the whole population and hence it seems clear that the youth are those who represent the main agents when it comes to the use of new technologies.

<sup>11</sup> Use of ICT in the Republic of Serbia, 2011, RZZS, Beograd.

As regards the place of residence (Table 6), it is evident that the most common non-users of the internet are among the rural youth. This percentage increases with age (17% among the rural youth aged 19/20, 25.8% aged 24/25, 31.8% aged 29/30 and as many as 35.3% among the rural population aged 34/35 do not use the internet). As we move from larger to smaller settlements, the number of young people who never use the internet increases, while more than a quarter of village residents do not use the internet as a source of information and/or for entertainment purposes.

**Table 6 Internet users by the size of a settlement**

	Internet surfing						Total
	Never	Monthly	Once a week	Several times a week	one hour a day	1-3 hours a day	
Size of a settlement							
Belgrade-center	2,7	2,3	4,5	11,4	34,1	45,0	100,0
Belgrade-suburbs	16,1	4,2	5,6	13,3	25,2	35,7	100,0
regional center	11,3	1,8	2,7	9,9	29,7	44,6	100,0
big town	13,3	7,6	9,5	19,6	22,2	27,8	100,0
medium-sized town	14,3	3,6	11,9	15,5	19,0	35,7	100,0
small town	14,7	4,0	4,7	16,0	22,0	38,7	100,0
village	27,1	3,8	8,8	15,5	20,5	24,3	100,0
<b>Total</b>	17,5	3,7	6,9	14,4	24,3	33,2	100,0

Through Kruskal-Wallis Test we tested the aforementioned relationship between the frequency of internet usage and the size of a settlement.<sup>12</sup> A statistically significant relationship was confirmed and the post-hoc tests confirmed that the greatest differences are between genders - between Belgrade and villages.<sup>13</sup>

If we look at the level of education and the use of the internet (Table 7), it is used the least by those with only primary school level education, then by vocational school pupils, fourth-year school-leavers, university students, and it is the least common among students. The situation is the same if we look at the other side of the table, which indicates frequency of internet use (increases with education).

<sup>12</sup> We revealed a statistically significant difference in internet use across seven different groups (Belgrade-center n=220, Belgrade-suburbs n=143, regional center n=211, big town n=158 medium-sized town n=84, small town n=150 and village n=638)  $\chi^2(6, n=1604) = 119.43.9, p < .001$ . Those from village have lowest median score (Md=3), while all others have same median score (Md=4).

<sup>13</sup> As there were multiple comparisons made (eleven comparisons of village and Belgrade-center with other types of settlements) Bonferroni adjustment reduced the alpha value to 0.004.

Mann-Whitney U Tests	Belgrade-suburb	regional center	big town	medium-sized town	small town	village
<b>Village</b>	U=36971, z=-3.63, p<.001, r=.13	U=44199, z=-7.69, p<.001, r=.26	U=44740, z=-2.24, p=.025	U=22321, z=-2.55, p=.011	U=37565, z=-4.2, p<.001, r=.15	
<b>Belgrade-center</b>	U=12586, z=-3.4, p=.001, r=.18	U=2268, z=-.44, p=.66	U=11868, z=-5.49, p<.001, r=.28	U=7108, z=-3.29, p=.001, r=.19	U=13677, z=-2.95, p=.003, r=.15	U=42301, z=-9.04, p<.001, r=.31

**Table 7. Internet users by the level of education**

	Internet surfing						Total
	Never	Monthly	Once a week	Several times a week	One hour a day	1-3 hours a day	
(in)complete primary school	65.50	5.90	4.20	5.00	9.20	10.10	100.00
lower vocational	37.20	4.80	11.20	16.00	11.20	19.60	100.00
high school	16.10	4.50	10.50	20.80	21.20	27.00	100.00
college/university	4.60	2.60	4.90	14.80	31.10	42.00	100.00
students	3.20	2.20	4.00	11.00	34.40	45.10	100.00
<b>Total</b>	17.10	3.60	7.00	14.60	24.40	33.30	100.00

The Kruskal-Wallis Test was employed to gauge the differences between educational groups<sup>14</sup>, while the post hoc tests<sup>15</sup> confirmed that the differences were the greatest among those still in the education process (students) and those with a college diploma or a university degree on the one hand, and those with (in)complete elementary school on the other. The situation with the education becomes even more complex if we introduce the additional knowledge and skills that young people possess. Foreign language skills are emerging as an important predictor of time spent on the internet: two-thirds of those who do not speak foreign languages do not use the internet. On the other hand, over 90% of daily internet users speak a foreign language well or have at least partial knowledge.<sup>16</sup>

When we look at gender (Table 8) and the internet use, we see a clear trend that indicates the creation of, and increase in, the differences between genders. In the younger category there is parity regarding the internet use (there is no statistically significant difference), but differences exist in the oldest category. We should note additionally that a difference exists between the genders among those who are parents – men use the internet more often and to a greater extent than women (which

<sup>14</sup> Through Kruskal-Wallis Test we revealed a statistically significant difference in internet use across five educational groups ((in)complete elementary school n=119, lower vocational n=250, high school n=448, college/university n=305 students n=401)  $\chi^2(4, n=1523) = 300.63, p < .001$ . Those with (in)complete elementary school have lowest median score (Md=0), those with lower vocational (Md=2), with high school (Md=3) while all others have same median score (Md=4).

<sup>15</sup> Multiple comparisons were made (eight comparisons of those with lower educational level with all other educational groups) and Bonferroni adjustment reduced the alpha value to 0.006.

Mann-Whitney U Tests	high school	college/university	students
(in)complete primary school	U=12797, z=-8.92, p<.001, r=.38	U=5493, z=-11.54, p<.001, r=.56	U=6526, z=-12.56, p<.001, r=.55
lower vocational	U=41799.5, z=-5.68, p<.001 r=.22	U=19508, z=-10.19, p<.001, r=.43	U=23497, z=-11.86, p<.001, r=.46
high school		U=49247.5, z=-6.72, p<.001, r=.25	U=59723.5, z=-8.76, p<.001, r=.3

<sup>16</sup> The connection between knowledge of foreign languages and time spent on the internet is examined with the help of the coefficient of the Spearman correlation. A relatively strong correlation was calculated between the two variables  $r = .44, n = 1584, p < .01$ , where those with better knowledge of foreign languages spent more time on the internet.

can also be explained by the higher proportion of women with domestic and child care responsibilities).

**Table 8. Internet users by sex and age**

Age		Internet surfing						Total
		Never	Monthly	Once a week	Several times a week	one hour a day	1-3 hours a day	
19/20	female	11,5	2,7	3,5	13,3	27,4	41,6	100,0
	male	12,3	4,5	5,0	11,2	23,5	43,6	100,0
24/25	female	19,1	0,5	4,1	14,1	35,0	27,3	100,0
	male	12,7	2,9	7,4	8,8	22,1	46,1	100,0
29/30	female	19,5	3,7	8,9	16,8	25,8	25,3	100,0
	male	18,9	3,5	5,5	15,4	16,9	39,8	100,0
34/35	female	25,5	7,8	13,5	18,8	16,1	18,2	100,0
	male	20,7	4,9	8,4	17,2	25,6	23,2	100,0

The age of young people also appears as a significant difference (Table 9). The younger (within the young category) use the internet more frequently. The table indicates that there are fewer of those who never use the internet among the younger. Although differences in the time spent online may be explained by a lower level of obligations that younger generations most commonly have, the fact that fewer of them do not use the internet indicates that younger generations master and use new technologies more easily.

**Table 9. Internet users by age**

age		Internet surfing						Total
		Never	Monthly	Once a week	Several times a week	one hour a day	1-3 hours a day	
age	19/20	11.9	3.5	4.2	12.3	25.7	42.5	100.0
	24/25	16.0	1.7	5.7	11.6	28.8	36.3	100.0
	29/30	19.2	3.6	7.2	16.1	21.2	32.7	100.0
	34/35	23.0	6.3	10.9	18.0	21.0	20.8	100.0
<b>Total</b>		17.5	3.7	6.9	14.4	24.3	33.2	100.0

Occupation, like the level of education, shows a distribution pattern with professionals and clerks at the top and farmers, workers and housewives at the bottom. It is to be expected that a better position in the labour market, which requires a higher level of education, equates to more time devoted to surfing the internet. An additional factor is that business organizations have a greater degree of computerization and networking, thus the majority of those holding clerical and professional positions use the Internet during working hours (often also for private purposes). Through the Kruskal-Wallis U Test, we gauged the differences between occupational groups and found that there are statistically significant

differences.<sup>17</sup> The majority of the students and professionals use the internet every day.

**Table 10. Internet users by occupation**

		Never	Monthly	Once a week	Several times a week	One hour a day	1-3 hours a day	Total
Occupation	farmers	68,2	4,5	2,3	2,3	6,8	15,9	100
	semi-skilled and unskilled workers	50,6	6	8,3	10,7	9,5	14,9	100
	skilled and highly skilled workers	20,5	4,6	11,6	16,5	20,8	25,9	100
	housewives	47,4	10,5	2,6	10,5	13,2	15,8	100
	technical personnel	11,9	4,1	10,6	22,9	22,5	28	100
	clerks	9,3	3,7	7,5	16,8	32,7	29,9	100
	professionals	4,5	0,6	2,6	17,5	26,6	48,1	100
	students	3,2	2,2	4	11	34,4	45,1	100
<b>Total</b>		17,1	3,6	7	14,5	24,6	33,2	100

And finally, Table 11 shows that there is a clear link between the level of income per capita of household and the time spent on the internet. As the revenue increases, so does the time spent online. Through Kruskal-Wallis U Test we examined the differences between five revenue groups and concluded that the significant differences are quite large.<sup>18</sup> The post hoc test clearly indicates significant differences between each revenue group, while those with the lowest incomes significantly differ from all others.<sup>19</sup>

<sup>17</sup> Kruskal-Wallis Test revealed a statistically significant difference in internet use across seven professional groups (semi-skilled and unskilled workers  $n=168$ , skilled and highly skilled workers  $n=370$ , technical personnel  $n=218$ , clerks  $n=107$ , professionals  $n=154$ , students  $n=401$ , housewives  $n=38$ )  $\chi^2(6, n=1456) = 238.52, p < .001$ . Semi-skilled and unskilled workers have lowest median score ( $Md=0$ ), housewives ( $Md=1$ ), skilled and highly skilled workers, ( $Md=3$ ), while all others have same median score ( $Md=4$ ).

<sup>18</sup> Through Kruskal-Wallis Test we revealed a statistically significant difference in newspaper reading across five different income groups (-80EUR  $n=245$  81-160 EUR  $n=430$ , 161-240 EUR  $n=257$ , 241-320 EUR  $n=166$  and 321+  $n=214$ )  $\chi^2(4, n=1312) = 117.28, p < .001$ . Those with -80EUR EUR income per household capita have lowest median score ( $Md=2$ ), those between 81-160 EUR ( $Md=3$ ) while all others have same median score ( $Md=4$ ).

<sup>19</sup> We made seven comparisons of lowest and highest income of household per capita with other income groups, and therefore used reduced the alpha value (0.007).

Mann-Whitney U Test	81-160 EUR	161-240 EUR	241-320 EUR	321+
-80 EUR	U=40720, z=-5.03, p<.001, r=.19	U=21345, z=-6.42, p<.001, r=.27	U=11568.5, z=-7.65, p<.001, r=.38	U=13913, z=-8.97, p<.001, r=.42
321+	U=31864.5, z=-6.56, p<.001, r=.26	U=22466, z=-3.59, p<.001, r=.17	U=16787, z=-.98, p<.001	

**Table 11. Internet users and income of household per capita**

EUR	Internet surfing						Total
	Never	Monthly	Once a week	Several times a week	One hour a day	1-3 hours a day	
-80	42,1	4,8	5,2	11,1	14,8	22,1	100,0
81-160	16,3	4,9	9,0	17,8	22,8	29,0	100,0
161-240	12,8	1,9	9,4	14,7	25,3	35,8	100,0
241-320	5,7	2,3	7,4	13,7	25,7	45,1	100,0
321+	5,8	2,2	4,0	8,1	35,0	44,8	100,0
<b>Total</b>	17,7	3,6	7,3	13,8	24,0	33,5	100,0

### Young people without ICT and newspaper information

We are particularly interested in a special sub-group of young people who have no access to either the print media or the internet, or rather those young people who do not read newspapers and do not use the internet. Within the sample, this group of young people accounts for 6.2% of quite underprivileged people, as we shall see. According to occupation, just over a half of agricultural workers (27.3%), unskilled and semi-skilled workers (25.3%), as well as 15.8% of housewives, fall into this group, but much fewer (3.2%) of skilled and highly skilled workers, 2% of students, 1.8% of clerical personnel and 1.3% of professionals. According to the level of education, as many as 70% of those who have not completed primary school education do not read newspapers or use the internet, which is also the case for 23% of those with primary education and 10.4% of those who have completed some form of technical/vocational school. This percentage continues to decline markedly as the level of education rises, thus only 3.5% of those who have completed four year of high school, 3% of college graduates and 3.8% of university graduates do not use either of these two sources of information. An even better predictor than the educational level of the respondents is the educational level of their parents (according to the domination principle). More than half of those whose parents have not completed primary school (52%) fall into this group, as do 17.5% of those with primary education, 9.1% of those with technical/ vocational education, 2.2% of those with four years of high school, less than 1% of those with higher education and not a single case among those who have a parent with a university degree. When it comes to ethnicity, around half of all Roma (48%) are included in this group, while the share among the majority ethnic group is 3.7%. The results are similar for gender, more women (6.6%) than men (5.5%). According to the material wealth, distribution is as follows: among those with the lowest income per head of household (up to 80 EUR a month), 17.2% fall into this group, as do 5.3% of those with the income between 81-160 EUR a month and 2.9% of those with the average income on the scale (161-240 EUR). Self-perception of wealth shows similar results: as many as 40% of those who believe they lack sufficient money to feed themselves, 11.4% of those who have enough for food but not for clothing and footwear, 2.7% of those who have enough for clothing and food but not for more expensive luxury

items and 1.2 % of those who have enough for all of the aforementioned but not for expensive items like cars, while there are none among those who perceive their material condition as being very good. According to the size of a settlement, the highest percentage is among the rural youth (9.2%), unlike urban youngsters, where the percentage is about 4% – while the lowest is in Belgrade, 2.5% We can say that these young people are in many ways excluded from the media and that their exclusion is a result of their unenviable social position.

## Conclusion

The emergence of new media, such as the internet, does not preclude the use of old media: press, radio and television. These media mutually complement one another and transform into mutual relations. However, what the new media bring with them is a greater potential for inclusion in the public sphere, creating the possibility for communication and reflection among participants. The effects vary, from atomization of participants to creating groups of participants on various grounds with the potential for action. Although new media emerge at relatively low cost and although their spread is really fast, a part of the population still remains outside the sphere of their influence. In this paper we attempted to investigate the hypothesis of the youth inclusion through the media. Based on the analysis of the media inclusion of young people, we can conclude that our study confirmed the existing hypothesis regarding unequal access to, and the use of the media, especially the internet. Young people in Serbia are not equally informed, nor are they equally interested in issues which imply social and political participation.

Television proved to be the most democratic medium. Almost all households in Serbia have a television set and almost all young people watch TV. But the time spent watching television indicates a significant presence of "traditional" forms of informing, which entail centralized and one-way communication. The dominance of this form of information flow and communication reflects a relatively low participatory potential of young people. Newspapers that have higher requirements for their use are the first significant form of media exclusion. The biggest difference occurs in the use of internet, which actually allows the highest level of communication and participation in the public sphere. The media scene is one of the segments of the society that keeps changing very fast, and although the increase in the usage of ICT is high, Serbia still lags behind the neighboring countries and the EU. The significance of the late beginning of the transformation is underlined by the fact that all of the former SFRY republics are now ahead of Serbia with regard to all ICT indicators.<sup>20</sup>

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<sup>20</sup> It is important to note that a large part of the infrastructure necessary for digitalization of the media scene, which is an important precondition for wider spreading of broadband networks at affordable prices, was destroyed during NATO bombardment.

RZZS research, as well as CEPIT research (2005), show that significant differences in ICT use exist between younger and older that favor the young, but our research suggests that this divide actually reoccurs also within categories of young people themselves – whereby the youngest make use of the internet most often. ICT is most frequently used by the younger and better educated segment of the young urban population, and therefore we can confirm that the digital divide, i.e. unequal access to ICT, also exists among young people themselves. Finally, we have to mention that characteristics of the young population who are excluded from the internet sphere (Milovanović, 2005) do not represent a specific national context, but on the contrary, they are rather a part of the unique global online culture, while any specific characteristics of the position of young people in Serbia could be viewed as a consequence of the late inclusion in the processes of social and political transformation; therefore, availability of the new media is much lower than in the EU and the region, while the differences within the community are more pronounced.

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## Appendix

**Table 1 Frequency of Internet access: once a week (including every day)**

GEO/TIME	Individuals, 15 to 24 years old		Individuals, 25 to 34 years old	
	2007	2009	2007	2009
European Union (27 countries)	78	88	66	77
Belgium	88	93	77	87
Bulgaria	58	75	40	60
Czech Republic	74	85	52	69
Denmark	95	96	89	94
Germany	89	94	83	90
Estonia	90	96	82	90
Ireland	67	80	66	77
Greece	56	76	46	58
Spain	77	86	61	72
France	84	91	79	83
Italy	59	72	49	60
Cyprus	57	82	50	63
Latvia	91	96	74	85
Lithuania	86	93	62	77
Luxembourg	90	96	82	94
Hungary	80	88	66	78
Malta	77	91	59	70
Netherlands	96	98	92	97
Austria	80	94	77	83
Poland	77	91	56	76
Portugal	77	84	53	71
Romania	49	61	29	43
Slovenia	83	95	74	84
Slovakia	79	93	62	80
Finland	98	97	95	98
Sweden	90	98	87	97
United Kingdom	83	95	76	88
Iceland	99	100	96	99
Norway	92	98	91	98
Croatia	64	80	46	69
Former Yugoslav Republic of Macedonia	:	83	:	60
Turkey	43	52	28	39
Serbia	49	59	40	52

Source: EUROSTAT