

CONSUMPTION ANALYSIS OF YOUTUBE'S ENTERTAINING AND EDUCATIONAL CONTENT FROM FIFTH TO THE EIGHTH CLASS OF PRIMARY SCHOOL

Karlo Kimer, mag. paed. et. educ. hist.

Abstract

The goal of this paper is to examine YouTube's consumption frequency, its educational and entertaining content, its content creators YouTubers and to analyze the relation of consumption frequency between educational and entertaining content on a sample of 100 students from fifth to the eighth class of primary school (46 girls and 54 boys). The study was conducted with the constructed questionnaire, which was divided into four categories: sociodemographic features, consumption frequency of educational and entertaining content, everyday habits during YouTube's usage, and popularity of educational and entertaining channels, YouTubers. During data analysis descriptive statistics was used and ANOVA and T-test for independent samples for significant differences. Results have shown that students are on average spending more time on YouTube (M=3, 23) than on television (M=2, 67) where daily consumption increases with every higher class. Smartphones are being used as the main platform for YouTube's usage for the majority of students, precisely said for 72 students. Results have also shown that entertaining contents (M=2.79) are more used than educational content (M=2.18) where music content (M=3.88), funny videos (M=3.38), and gaming videos (M=3.19) are being most used. The strongest statistical differences between girls and boys have been found in gaming content ($p<.001$), to the boys' favour, and in beauty and style content ($p<.001$), to the girls' favour. Furthermore, results have shown that the average majority of students (M=2.93) are precisely choosing which videos are they going to watch, with the taken fact that the majority of students are watching videos from subscribed channels. In the end, entertaining channels (M=2.51) are more popular than educational channels (M=1.39). On the results' basis, it is now possible to conduct further research and findings of didactic-methodical values of YouTube as a teaching tool, mainly thinking on its entertaining content, with the goal to upgrade and enhance education praxis and to promote a teacher as self-reflexive and adaptable, freely said, explorer in his dynamic, ever-changing and challenging work.

Keywords: YouTube, educational content, entertaining content, primary school

Sažetak

Cilj je istraživanja ispitati učestalost uporabe internetske stranice YouTube, njezinih obrazovnih i zabavnih sadržaja i tvorca tih sadržaja *youtubera* te analizirati odnos učestalosti konzumacije između obrazovnih i zabavnih sadržaja na uzorku od 100 učenika osnovnih škola od petog do osmog razreda (46 djevojčica i 54 dječaka). Istraživanje se provelo uz pomoć konstruiranog upitnika koji je bio podijeljen na četiri dijela: sociodemografska obilježja, učestalost uporabe obrazovnih i zabavnih sadržaja, svakodnevne navike uporabe YouTubea i popularnost obrazovnih i zabavnih elemenata *youtubera*. Prilikom obrade podataka koristila se deskriptivna statistika te ANOVA i t-test za nezavisne uzorke za otkrivanje statistički značajnih podataka. Rezultati pokazuju kako se učenici u prosjeku češće koriste YouTubeom ($M=3,23$) od televizije ($M=2,67$) gdje dnevna konzumacija raste sa svakim višim razredom. Pametni telefon glavno je sredstvo uporabe YouTubea za većinu učenika, tj. za njih 72. Rezultati pokazuju kako su zabavni sadržaji ($M=2,79$) posjećeniji od obrazovnih ($M=2,18$), najviše se koriste glazbeni sadržaji ($M=3,88$), smiješni videozapisi ($M=3,38$) i *gaming* videozapisi ($M=3,19$). Najveće statističke razlike između djevojčica i dječaka pronalaze se u *gaming* videozapisima ($p<.001$) u korist dječaka i u videozapisima iz područja ljepote i mode ($p<.001$) u korist djevojčica. Nadalje, rezultati pokazuju kako većina učenika u prosjeku ($M=2,93$) pomno bira koje će videozapise gledati s činjenicom kako većina ispitanika gleda videozapise pretplaćenih kanala. I na posljetku, zabavni programi ($M=2,51$) popularniji su kod učenika od obrazovnih ($M=1,39$). Na temelju rezultata istraživanja moguće je istražiti didaktičko-metodičke vrijednosti YouTubea kao nastavnog sredstva, ponajprije s obzirom na njegove zabavne sadržaje, s ciljem unaprjeđivanja odgojno-obrazovne prakse i promicanja učitelja/nastavnika kao samorefleksivnog i prilagodljivog istraživača u svom dinamičnom, promjenjivom i izazovnom radu.

Ključne riječi: obrazovni sadržaji, osnovna škola, zabavni sadržaji, YouTube

INTRODUCTION

The development and rise of the Internet have brought many changes in the world of media. The once-dominant media during the 20th century, such as television, radio, and print, were being replaced by their online versions. While previous media, more precisely said their content, could have been controlled and monitored through comprehensive censorship and regulation by the state and media houses, the new digital age via the Internet allows users to freely choose desired content at any time (Forsling, 2011). Although the written text is still considered as a relevant source of information, just as television became more used than the print press in the 20th century, so did the digital video become the main media's tool for transmitting the information. Thus, video has become an indispensable aspect of modern social networks such as Facebook, Instagram, Twitter, but also of various other media houses, which, in addition to television, are also advertised via the Internet (Snelson, 2011). However, no other website has become as famous in the field of videoclips as YouTube, which along with Facebook is considered the most visited and most popular website (Kelsey, 2010).

YouTube began with its business in early 2005 with the clear goal of allowing users to upload, share, comment, and rate an ever-growing rich video database (Berk, 2009). There are certain tolerance limits for posted content where it seeks to ban and regulate the posting of malicious violent, sexual and discriminatory content, but despite that, the freedom to create and use different types of videos and genres is truly unlimited, which is why YouTube has become so popular (Holmbolm, 2015). It is in this area, the freedom to use different content, where numerous controversies and debates arise. Which content can be considered as a quality and productive content on the one hand, and which of poor quality, harmful and empty content on the other? However, it is clear that the content on YouTube is primarily intended for fun and relaxation (Berkec, 2012). In general, it can be said that the media are used for entertainment purposes in everyday life, which is confirmed by a survey conducted by Labaš and Marinčić on a sample of 184 primary school students where 63% of respondents often use the media for entertainment purposes rather than for information purposes (Labaš, Marinčić, 2016). This is exactly the main aspect that has been sought to be explored since YouTube started its work, and that is the relationship between entertaining and informative, more precisely said, educational content. Content on YouTube covers most of the everyday topics such as politics, music, film, technology, nature, culture, health, etc. (Berk, 2009). Likewise, it is undoubtedly true that there are educational YouTube channels across almost all academic fields, from history and geography to foreign languages and STEM areas. Numerous authors agree on the following fact, while television, radio, and print controlled the ratio of entertainment and educational content, but because of the sustainable freedom of content producers and entertainment-oriented consumers, it is very difficult to monitor and evaluate the production and use of educational content (Zaidi et al., 2018; Watkins, Wilkins, 2011; Tewfik, Work, Shulman, 2020).

Since its first launch in 2005, YouTube has been the subject of numerous studies, primarily due to its rapid rise in the number of its users, but also in the number of uploaded and viewed videos (Muchtar et al., 2018). The ability to share, upload, and download videos have allowed well-known universities such as Cambridge, Oxford, and Harvard to set up their own YouTube channels and to post lecture videos to make them available to students all across the world. In other words, YouTube conceived what we now call online teaching and online learning (Guo, Kim, Rubin, 2014). However, it was not enough to set up your own educational content but also to use other available content for educational purposes. Therefore, there is an ever-growing need to differentiate educational content from entertainment content, recognition and use of educational content, but also for the promotion and popularization of educational content on YouTube (Olasina, 2017). The main reason, or better said the need for research, lies in the fact that YouTube content needs to be used as a teaching tool. However, there is one problem. Educational content, designed by educational experts on YouTube, has its didactic and methodological value for use in teaching, but the question arises whether entertainment content can be used also as a teaching tool to achieve educational goals (Zaidi and dr., 2018). This primarily refers to the use of content from the film, music, and gaming industries, which

primarily have entertainment and commercial value. However, even in this case, such videos are encouraged to be used to develop students' critical thinking and to develop the ability to distinguish real facts from, for example, film facts, but this requires thorough class preparation by teachers and students (Ramírez - Ochoa, 2016).

A study conducted by Olasina (2017) aimed to discover the impact of YouTube videos on improving academic writing skills. The sample of 40 students was divided into two groups. The first group of students was taught in the "traditional way", with guided methods by researchers, while the second group of students was taught exclusively via YouTube, where the videos were carefully selected by the researchers, meaning they had an educational character in them. Qualitative methods, using group interviews, individual interviews, and finally written exams, brought the results where students in the second group achieved better results and most importantly, they were more motivated and stimulated to work than students in the first group, who experienced feelings of dissatisfaction, frustration, confusion, and anger. The nature of this research was experimental, which means that pre-defined research methods were used where there was no room for improvisation, and the research was conducted outside the framework of formal education in the form of a short-term academic writing course. The question arises, despite the positive experiences of students in the use of YouTube videos, how didactically and methodologically appropriate is it to use videos exclusively as the only teaching tools in the classroom.

Furthermore, a study conducted by Zaidi et al. (2018) aimed to use a questionnaire to investigate the attitude of 159 students, who were participants in English language courses at college, about the usage of YouTube as an effective tool in learning English. Nearly 97% of students find that YouTube makes learning English interesting, and just that many students find it easier to learn English in the classroom because of YouTube. The authors concluded that students are motivated and interested in using YouTube in learning English and that the usage of YouTube by teachers and students in the classroom should be encouraged. The research itself was limited to examining students' attitudes about the usefulness of YouTube, as the authors themselves stated, examining students' attitudes should be extended to more respondents, including more colleges, occupations, but also to make gender representation more equal due to the unequal number of women (N = 113) and men (N = 46).

Balakrishnan and Griffiths (2017) focused on YouTube's impact on the formation of addiction in 410 students. They researched addiction through the prism of viewing content and creating content by users. The authors concluded that addiction develops very easily by those users who only watch content, and also by users who create that content. YouTube gives users, in addition to watching and creating content, social connectivity through sharing and commenting on videos, and most importantly by authors, the ability to express themselves creatively and to meet self-actualizing needs. All of those tend to make users addicted. On the other hand, Haridakis and Hanson (2009) were searching for a reason why 427 users are using You-

Tube. The reasons are identical to watching television: for fun, pleasure, occupation of free time. However, there are social reasons such as communicating with friends, meeting new people, participating in discussions, but also a general desire for a virtual connection with the world and society. By doing so, the authors conclude that YouTube has all aspects of a social network, albeit with fewer options compared to other social networks like Facebook or Twitter, but still with the ability to connect people via video. While these surveys offer different views on YouTube, due to the constant variability and dynamism of the digital network, it is necessary to periodically research the frequency of YouTube's usage and the preferences and interests of its users, to better prepare and plan for future studies.

The Swedish Media Council (2019) conducted large research on a sample of 4999 students divided into three groups according to their respective age: the first group between nine and twelve years, the second between thirteen and sixteen, and the third group between seventeen and nineteen years. The aim was to examine the frequency of usage of various media, including the usage of YouTube. The results showed that 58% of the first group used YouTube every day, then 70% of the second group, and finally 67% of the third group used YouTube every day. In all three groups, boys are at the forefront of everyday YouTube usage. When it comes to the time, the daily amount of YouTube's usage, 35% of the first group, 18% of the second group, and 20% of the third group watch videos on YouTube in less than an hour. Other students watch videos significantly longer where the time span averages between one to three hours per day. For the purposes of this research, it would be necessary to track the results from the first and second age groups.

However, the backbone, the main motive of this research, is the unpublished research conducted in the school year 2017/2018 on a sample of 613 students, 173 students from fifth to eighth grade of elementary schools, 220 students of vocational high schools and gymnasiums and 220 students (Cmrečnjak, Kimer, Leko, Livazović, Mađarac, Tomić, 2017). The aim of the research was to examine the frequency of usage of different types of media and content with regard to the type of attended educational institution and gender. From offered media and media tools, such as television, radio, print media, mobile phones, social networks, video games, etc., the usage of YouTube was on the general average ($M = 3.90$) in second place, behind mobile phones, for example, smartphones ($M = 4.21$). To better understand the context and given results, the values of the Likert scale were as follows: 1- never, 2- one to two hours a day, 3 - three to five hours a day, 4- to ten hours a day, 5- over ten hours a day. The above-average usage of YouTube tells us that the surveyed pupils and students spend up to ten hours a day, and 37% of them use YouTube over ten hours a day. If we take into account the oral answers during the survey, the dominant way of watching YouTube is via smartphones, which is why the average use of smartphones is also so high, where 51% of students use a mobile phone over ten hours a day and 25% use up to ten hours a day. According to individual class averages of YouTube's usage, the results are as follows: fifth grade ($M = 3.80$), sixth grade ($M =$

4.03), seventh grade ($M = 3.89$), and eighth grade ($M = 4.21$). Those given results explain and support the aim basis of this research and that it is necessary to go thoroughly into the topic of social and multimedia network YouTube, update the figures on the daily use of the site, but also analyze and distinguish educational content from entertainment content, as well to research more about the YouTube's content creators, *YouTubers*.

METHODOLOGY

Aim and purpose of the research

The aim of the research is to examine the frequency of YouTube's usage, its educational and entertainment content, and the creators of these YouTube content, and to analyze the relation of consumption frequency between educational and entertainment content among students from fifth to eighth grade.

The purpose of the research is to gain insight into students' awareness of the educational side of YouTube and to find out their interests and preferences in the content's choice, where the results could be used for further research aimed at didactic and methodological possibilities of using YouTube in teaching, in order to improve educational practice.

Operationalization of variables

Independent variables are sociodemographic characteristics of the respondents, school year or class, and gender.

Dependent variables are daily usage of YouTube and television, a manner in which is YouTube being watched (smartphone, desktop, laptop, tablet, television), then educational and entertainment content, daily habits when using YouTube, and educational and entertainment YouTube channels, or *YouTubers*.

Educational content includes the following variables: informational videos, language learning videos, videos from various sciences, tutorials, videos from the field of technology.

Entertainment includes the following variables: music videos, clips from movies or series, funny videos in the form of jokes and sketches, gaming videos, videos from the fields of sports, shopping, beauty, and fashion.

The following variables belong to educational channels or *YouTubers*: "Numberphile", "Simple History", "Easy Languages", "Dad, how do I", "Geography Now". These channels are selected based on their number of subscribers, the number of viewed videos, and the representation of each individual scientific field: mathematics, history, foreign languages, practical knowledge, and geography.

The following variables belong to entertainment channels, or *YouTubers*: “Mudja”, “Baka Prase”, “SerbianGamesBl”, “Omčo”, “PewDiePie”. These channels were selected based on their number of subscribers, the number of viewed videos, and the first four channels are considered as the most popular in the South Slavic-speaking area (Croatia, Serbia, Bosnia, and Herzegovina, and Montenegro). The fifth channel is considered the largest channel on the YouTube entertainment scene.

Research questions and hypotheses

The research questions are as follows:

1. On which medium do students spend more of their free time daily, on YouTube or television?
2. What is the average relation of consumption frequency between educational and entertainment content?
3. Do students watch carefully selected videos or leave their choice to YouTube’s algorithm?
4. What is the relation in popularity between educational and entertainment YouTube channels, or *YouTubers*?

Hypotheses

The following hypotheses can be derived from the research questions:

H1: Students on average spend more time on YouTube than on television

H2: Students, on average, watch entertainment content more often than educational.

H3: Students carefully choose the videos they want to watch.

H4: Students are more familiar with entertainment channels than with educational ones.

Respondents

The study involved 100 students from fifth to eighth grade, 22 of which were fifth-graders, 28 sixth graders, 33 seventh graders, and 17 eighth graders. Three schools participated in the study, one from an urban area and two from a rural area. 61 students participated from the urban area and 39 students from the rural area. In terms of gender, 46 female and 54 male students participated in the study. Regarding school success, last school year 2019/2020, one respondent passed with a grade of sufficient (2), with a grade of good (3) 12 respondents, with a grade of very good (4) 25 respondents, and with a grade of excellent (5) 62 respondents.

Procedure

The survey was conducted during October and November in the school year 2020/2021. The research was conducted by a written survey with the help of a constructed questionnaire. The research was anonymous and parents’ consents were collected for participation in the

research, as well as the consent of the school principals. Due to compliance with epidemiological measures, questionnaires were distributed to class teachers who conducted the survey process. In data processing, the program for statistical data processing SPSS 20 was used where descriptive statistics was chosen, and to find statistically significant results t-test for independent samples, with respect to gender, and test ANOVA, with respect to class, were chosen.

Instrument

A survey questionnaire was developed for this research and was divided into four parts. The first part of the questionnaire had seven questions, four of which related to socio-demographic characteristics, and the remaining three to the frequency of using YouTube and television and the way YouTube was used. The second part of the questionnaire had thirteen questions related to educational and entertainment content on YouTube. On a Likert scale from 1 to 5 (1 = never, 2 = once a week, 3 = two to three times a week, 4 = once a day, 5 = several times a day) students had to select a value that presented their opinion. The third part of the survey had eight questions related to the daily habits of the respondents on YouTube, and the Likert scale from 1 to 4 was used (1 = Does not apply to me at all, 2 = Partially does not apply to me, 3 = Partially applies to me, 4 = Completely applies to me). The last part of the questionnaire referred to the popularity of educational and entertainment channels, *YouTubers*, and the Likert scale from 1 to 4 was used (1 = I have never heard of or seen that channel, 2 = I have heard of that channel, but I have not visited it, 3 = I have heard of this channel and watched at least one video, 4 = I have heard of this channel and I follow it regularly).

RESEARCH RESULTS

The following results of the frequency of television and YouTube's usage were obtained by descriptive analysis, which is shown in the following tables:

Table 1 Frequency of daily YouTube's usage according to the school year

	School year				Σ
	5 th grade	6 th grade	7 th grade	8 th grade	
Never	1	0	0	0	1
Less than 1 hour	10	7	8	3	28
Between 1-2 hours	8	11	11	6	36
Between 2-3 hours	1	7	11	2	21
Between 3-5 hours	1	2	1	6	10
More than 5 hours	1	1	2	0	4
Σ	22	28	33	17	100
M	2.73	3.25	3.33	3.65	3.23

The ANOVA test revealed a statistically significant difference ($p < 0.05$) between the fifth ($M = 2.73$) and eighth grade ($M = 3.65$), fifth and seventh grade ($M = 3.33$), and while between the fifth and sixth grade ($M = 3.25$) no statistically significant difference was found. The results show that the frequency of YouTube's usage is increasing towards higher grades.

T-test for independent samples found a statistically significant difference ($t = -3.522$, $p < 0.001$) between female students ($M = 2.83$) and male students ($M = 3.57$) i.e., boys on average use YouTube more daily than girls.

Table 2 Frequency of daily television's usage according to the school year

	School year				Σ
	5 th grade	6 th grade	7 th grade	8 th grade	
Never	1	0	4	4	9
Less than 1 hour	6	15	7	5	33
Between 1-2 hours	11	10	15	4	40
Between 2-3 hours	1	3	5	3	12
Between 3-5 hours	1	0	2	0	3
More than 5 hours	2	0	0	1	3
Σ	22	28	33	17	100
M	3.05	2.57	2.82	2.59	2.76

The ANOVA test did not reveal statistically significant differences between the fifth ($M = 3.05$), sixth ($M = 2.57$), seventh ($M = 2.82$) and eighth grade ($M = 2.59$). The results show that, on average, the fifth graders daily use television the most.

The T-test for independent samples did not reveal a statistically significant difference between female students ($M = 2.91$) and male students ($M = 2.63$) where on average girls use television more daily than boys.

When the results of all students are summed, on average, they spend more free time using YouTube ($M = 3.23$) than television ($M = 2.76$). Similarly, respondents use YouTube on average between 1 and 2 hours a day, while they use television for a minimum of up to 1 hour a day.

Regarding the way YouTube is being used and consumed, by the means and tools with which YouTube is used, 72 students use a smartphone as the main mean, tool for using YouTube, 11 students use a laptop, 11 students use a desktop computer, 4 students use a tablet, and 2 students use television as their main mean of using YouTube.

Entertainment and educational content

The following data were obtained by descriptive analysis on the time usage of entertainment and educational content, and the results are shown in the following table by means:

Table 3 Descriptive display of frequency of watching entertainment and educational content according to the school year and gender

	5 th	6 th	7 th	8 th	M	♀	♂
Informational videos	2.18	1.71	1.91	2.06	1.94	1.72	2.13
Language learning videos	2.36	2.11	1.79	2.11	2.06	2.02	2.09
Science videos	1.95	2.11	1.70	1.82	1.89	1.67	2.07
Tutorials	2.95	2.86	2.67	2.06	2.68	2.72	2.65
Videos from the field of technology	2.36	2.04	2.39	2.71	2.34	2.13	2.51
Educational content - Mean	2.36	2.17	2.09	2.15	2.18	2.05	2.29
Music videos	3.32	4.07	4.06	3.94	3.88	3.98	3.78
Clips from movies or series	2.50	3.21	3.00	3.59	3.05	3.39	2.76
Funny videos	3.23	3.68	3.03	3.24	3.38	3.00	3.70
Gaming videos	3.00	3.00	3.30	3.53	3.19	2.07	4.15
Sports videos	2.41	2.57	2.94	2.67	2.67	2.15	3.11
Shopping videos	1.86	1.39	2.00	2.35	1.86	2.00	1.74
Vlogs	2.23	2.32	2.48	2.94	2.46	2.85	2.13
Beauty and fashion videos	1.86	1.75	1.84	1.88	1.83	2.49	1.28
Entertainment content - Mean	2.55	2.75	2.83	3.01	2.79	2.74	2.83
M	2.48	2.52	2.55	2.68		2.48	2.62

The results shown in the table show that music content is, on average, the most viewed of all other content in each grade. The least-watched entertaining content is in the field of beauty and fashion and shopping ($M < 2.00$), and the least-watched educational content are scientific videos and informative videos ($M < 2.00$). The summed averages of all viewed content by grades show that the frequency of usage of all content increases with higher grades.

When the averages of educational content ($M = 2.18$) and entertainment content ($M = 2.79$) are summed, it can be seen that the students watch entertainment content more often than educational content.

The T-test for independent samples revealed the following statistically significant differences with regard to gender: in informational records ($t = -2.000$, $p < .05$) where boys consume more,

in clips from movies or series ($t = 2.223, p < .05$) where girls consume more, with funny videos ($t = -2.751, p < .01$) where boys consume more, with gaming videos ($t = -7.543, p < .001$) where boys consume more, in videos in the field of sports ($t = -3.421, p < .01$) where boys consume more and in videos in the field of beauty and fashion ($t = 5.639, p < .001$) where girls consume them more than boys.

When the means of all viewed contents are summed, it can be seen that boys ($M = 2.62$) use them more often than girls ($M = 2.48$).

Everyday habits on YouTube

The following data on the daily habits of students on YouTube were obtained by descriptive analysis, and the results are shown in means in the following table:

Table 4 Descriptive display of everyday habits on YouTube according to gender

	5 th	6 th	7 th	8 th	M	♀	♂
YouTube is the first site that I open.	2.82	2.29	2.09	2.29	2.34	2.26	2.40
I know exactly which video I want to watch.	2.91	3.00	2.81	3.00	2.92	2.97	2.87
I watch mostly what YouTube recommends to me.	1.81	1.68	2.12	2.59	2.01	1.91	2.09
I watch videos from randomly selected channels.	2.14	1.71	2.45	2.11	2.12	1.91	2.29
I watch videos from subscribed channels.	3.18	2.93	3.09	3.24	3.09	2.70	3.43
I always skip ADs or commercials.	3.05	3.68	3.88	3.76	3.62	3.72	3.54
I watch every video from beginning to end.	3.18	2.89	2.73	3.00	2.92	2.91	2.93
Videos are helping me during studying.	1.59	2.86	2.15	2.35	2.60	2.43	2.11

The results show that 69 students (78% of girls and 61% of boys by gender) know exactly or approximately which video they want to watch, they carefully choose which videos to watch. As for the videos that YouTube recommends through its algorithm, 70 students (71% girls and 65% boys) do not watch what YouTube recommends, and related to those results, 65 students (67% girls and 63%) do not watch videos from random channels. In contrast, 74 students (61% girls and 85% boys) watch videos from already subscribed channels. Finally, 58 students (48% girls and 66% boys) felt that videos did not help them in learning, while 42 students felt that videos helped them in learning.

Regarding statistically significant differences, the strongest and most relevant difference ($F = 6.592$, $p < .001$) was obtained by the ANOVA test between a fifth and sixth grade in the use of learning videos where 64% of sixth-grade students use learning videos and 83% fifth graders do not use videos in learning.

The T-test for independent samples revealed the only statistically significant difference ($t = -3.484$, $p < .01$) in watching videos from subscribed channels where boys ($M = 3.43$) watch them more than girls ($M = 2.70$).

Entertainment and educational YouTube channels

The following data on the popularity of entertainment and educational channels on YouTube were obtained by descriptive analysis, and results are shown by their means in the following table:

Table 5 Descriptive display of frequency of watching entertainment and educational YouTube channels according to the school year and gender

	5 th	6 th	7 th	8 th	M	♀	♂
„Mudja“	2.50	2.31	2.84	2.88	2.63	2.33	2.89
„Baka Prase“	2.55	2.50	2.63	2.70	2.59	2.65	2.54
„SerbianGamesBl“	2.23	2.29	2.21	2.47	2.28	2.00	2.52
„Omčo“	2.59	2.25	2.70	2.35	2.49	2.24	2.70
„PewDiePie“	2.45	2.36	2.60	3.00	2.57	2.00	3.06
Entertainment channels - Mean	2.46	2.34	2.60	2.68	2.51	2.24	2.74
„Numberphile“	1.63	1.11	1.15	1.35	1.28	1.26	1.29
„Simple History“	1.32	1.43	1.42	1.88	1.48	1.50	1.46
„Easy Languages“	1.27	1.36	1.27	1.64	1.36	1.41	1.31
„Dad, how do I “	1.36	1.07	1.18	1.29	1.21	1.30	1.13
„Geography Now“	1.50	1.50	1.42	2.24	1.60	1.50	1.69
Educational channels - Mean	1.4	1.29	1.29	1.68	1.39	1.39	1.38

When the means of the popularity of entertainment ($M = 2.51$) and educational ($M = 1.39$) channels are summed, the results show that all entertainment channels are at least known to most respondents, they have heard about them. As for entertainment channels, most people are unfamiliar with each channel. For example, 79 students had never heard of the “Numberphile” channel, 70 students had never heard of the “Simple History” channel, 74 students had never heard of “Easy Languages”, 84 students had never heard of “Dad, how do I” and 62 students had never heard of “Geography Now”.

T-test for independent samples revealed statistically significant differences between boys and girls where boys are more familiar with the following channels: "Mudja" ($t = -2,785$, $p < .01$), "SerbianGamesBL" ($t = -2,675$, $p < .01$), "Loop" ($t = -2.449$, $p < .01$) and "PewDiePie" ($t = -5.348$, $p < .001$).

DISCUSSION

H1: Students on average spend more time watching YouTube than watching television

The results showed that students spend more time on YouTube ($M = 3.23$) than on television ($M = 2.76$), on average between one and two hours a day. This confirmed the set hypothesis. However, in comparison with the research (Cmrečnjak, Kimer, Leko, Livazović, Mađarac, Tomić, 2017), significant differences in the frequency of YouTube's usage can be noticed. In that study, the overall average of primary school students ($M = 3.98$) is higher than in this study, but also the values themselves are higher. While according to this research, elementary school students spend between one and two hours a day, according to the compared research, elementary school students spend a minimum of between three and five hours a day, and the results tend towards ten hours a day. The results of this research in the frequency of media usage are therefore significantly closer to the results of the Swedish Media Council (2019) where most students spend on average between one and three hours on YouTube. It can be assumed that this decline in the average daily usage of YouTube, in the interval of two years, is based on the possibility of using other media content besides YouTube and because of mentioned dynamic change of interests and "trends". Although television is still a relevant media, today's young generations are growing up with new Internet-based media, especially in primary school where their eyes are no longer focused on the television screen but rather on the smartphone screen (Jacobsson, Hagberg, 2020). This claim is also proven by this research where the smartphone is the main tool for using YouTube.

H2: Students, on average, watch entertainment content more often than an educational one.

Summing the mean of all entertainment content ($M = 2.79$) on the one hand and the mean of educational content ($M = 2.18$) confirms the hypothesis that students watch entertainment content more often than educational content. The most popular are music content ($M = 3.88$), followed by funny videos ($M = 3.38$) and gaming videos ($M = 3.19$), and the latter two are more popular among boys than among girls. There are no differences in interest between classes, but as expected there are differences of interest between boys and girls where stereotypical differences in preferences and male-female interests still prevail. On the other hand, educational content has received low results, although the highest mean has the category

“Tutorials”, it should be borne in mind that such videos can cover any area of human activity. However, the very intention to learn something can have educational value due to the existence of the student’s curiosity, which should be used and directed towards other areas that will be more useful for his learning and development.

H3: Students carefully choose the videos they want to watch.

Due to the established mean ($M = 2.93$), it can be concluded that most students carefully choose the content they want to watch, they are not choosing those videos that are offered as a recommendation. If we connect with the fact that most people watch videos from subscribed channels, then the confirmed hypothesis has its basis. The question is whether students type into the YouTube search engine exactly what they want to watch, regardless of subscribed channel, or watch videos only from a subscribed channel. Likewise, there are significant results that explain the role of videos in learning where it is vital to continuously work with students on their awareness of the usefulness of videos in learning, especially in the lower grades.

H4: Students are more familiar with entertainment channels than with educational ones.

Adding the mean of all entertainment channels ($M = 2.51$) on the one hand and the mean of educational content ($M = 1.39$) on the other hand, confirms the hypothesis that the students’ entertainment channels are more familiar and popular than educational ones. This means that viewed entertainment channels are familiar to most students, and because these are mostly gaming channels in the South Slavic-speaking area, it can be concluded that gaming has become a serious study area that needs more research. Although some students do not follow these channels or have not watched a single video, the very fact that they have heard and know about them confirms theories that YouTube is also a social network, not just a video platform. *YouTubers* are the new stars of modern times, they have professional careers and earn hefty sums of money, and are certainly becoming more powerful and influential on young people than film and music artists (Jiménez, García, de Ayala, 2016). The question arises, what kind of influence do *YouTubers* exert? As *YouTubers* are in direct contact with their viewers, which means that they address their viewers directly through videos and have a great opportunity to influence the value system and decision-making of viewers, it would be necessary and relevant to investigate this phenomenon.

Potential implications in further research and practice

The purpose of this research was to gain insight into students' awareness of the educational side of YouTube and to find out their preferences and interests, what is in their "trending". With the obtained results, further research can go in two directions. For starters, research can be continued in comparing the frequencies of YouTube's usage with other media that have not been researched yet. Furthermore, it is possible to continue research with the aim of entering more detail into the area of everyday users' habits when using YouTube and to observe YouTube's addiction as a significant factor in media consumption. Finally, research can enter into the value system and users' thinking about YouTube and *YouTubers*, and reveal what kind of positive or negative impact YouTube consumption has on the users. These were limitations and omissions of this research that were not touched upon due to research limitations and focus on educational and entertainment content.

The second direction of future research, based on the results of this research, should be directed towards the practical way of research. While experiments can yield significant results in the field of media, such as research by Olasina (2017), due to the dynamism and variability of the media world, any strictly methodologically defined and designed research can yield short-term results. It is likely that the results and opinions of the respondents will change after a short period of time from the performed experiment. Therefore, teachers, educators, and other researchers who are interested in using, not only YouTube but also other media content in their teaching, are advised to turn to action research. For example, extraordinary circumstances spawned so-called "Online school" during the 2019/2020 school year, where teachers were forced to work in completely new working, learning, and teaching conditions without prior preparation and announcement. Due to this fact, it is necessary to encourage teachers to be independent researchers of new changes, to explore new didactic-methodological possibilities, tools, and methods, and to try to improve their educational practice. Rapid advances in technology simply do not leave too many opportunities for teachers to adapt and they are forced to be lifelong educated and trained to fully capitalize on what is offered to them (Krauskopf, Hesse, Zahn, 2012).

Action research provides flexibility and the ability to adapt to possible changes in practice, which is the main feature of the educational process. Thus, the research topic and the teacher are at the centre of observation and mutual interaction. On the one hand, the effectiveness of the activity is studied, but it is also necessary for the teacher to conduct self-study and self-reflection because the purpose of action research is to improve educational practice, and the holder of this practice is the teacher (Putnam, Rock, 2017). Action research can go in two directions, depending on the choice of evaluating the didactic-methodological possibilities of entertainment or educational content. It is considered that it is not necessary to research the didactic-methodological values of educational content on YouTube, but only to spread awareness among students of the usefulness, productivity, and quality of this content for their

learning. Action research should therefore focus on the evaluation of entertainment and commercial content. Namely, entertainment content on YouTube is better known and closer to students than educational content, and one of the duties of teachers is to explore the interests and preferences of students, not only to stay “in”, but also to motivate their students to work, to use their hobbies in practice and finally to perfect and improve him/herself. Before conducting action research, the teacher should examine students’ preferences, to examine what students watch on YouTube and what their favourite channels are. This will reveal what type of entertainment content is most popular and how they can relate that content to their subject. Not all content will be able to relate to their subject, but the teacher should continue to research until he or she finds a connection. After that, the teacher can design action research and start its implementation, guided by the thought that he/she must always be ready for potential changes. After conducting research in a certain period, the teacher can evaluate and conclude whether the entertainment content can be used as a teaching tool or as a motivational tool.

CONCLUSION

Based on the results of the research, it can be concluded that YouTube, after fifteen years since its launch, still plays a relevant and unavoidable role in the virtual and digital world of youth. Research has confirmed that students use YouTube more often than television for a minimum of one hour a day. The transition of watching various content from television to the Internet was an inevitable phenomenon, and if television in the 20th and at the turn of the 21st century was considered a kind of “third parent”, then today it is certainly a smartphone. Observing society in everyday activities, smartphones can often be seen in the hands of all generations, and even in the hands of newborns. In addition to mobile games, it can often be noticed that YouTube is the site that young people most often watch on a smartphone, even from the earliest years. The research confirmed that entertainment content is much more popular than educational content, which is expected because users ask media content to be entertaining, relaxing, stimulating, and to “shorten” their time. Most respondents watch videos from subscribed channels and *YouTubers*, who can be considered as idols and stars of today and it certainly wise to pay more attention to them because they have an impact on the youngest users, as well as the so-called *influencers*, also idols and stars of other websites like Facebook or Instagram. However, the results of this research are the starting point, a prerequisite for its described purpose to be realized in practice, and that is the evaluation of educational and especially entertaining content of YouTube in the educational process. Better said, a purpose to find didactic-methodological possibilities for how to use entertainment content as teaching tools.

REFERENCES

- Berk, R. A. (2009). Multimedia Teaching with Video Clips: TV, Movies, Youtube, and mtvU in the College Classroom. *International Journal of Technology in Teaching and Learning*, 5(1), 1-21.
- Berkec, S. (2012.). Od Goethea preko Schuberta do Rammsteina – primjer primjene YouTube-a u nastavi njemačkog jezika. *Život i škola*, 58(27), 244-257.
- Čmrečnjak, M, Kimer, K., Leko, D., Livazović, G., Mađarac, D., Tomić, S. (2017). Komparacija učestalosti korištenja medija kod osnovnoškolaca, srednjoškolaca i studenata. Neobjavljeno.
- Forsling, K. (2011). Digital kompetens i förskolan, *Karlstads universitets Pedagogiska Tidskrift*, 7(1), 76-95.
- Guo, P. J.; Kim, J., Rubin, R. (2014). How video production affects student engagement: An empirical study of MOOC videos. *Proceedings of the First ACM Conference on Learning @ scale conference*, 41-50.
- Haridakis, P., Hanson, G. (2009). Social Interaction and Co-Viewing With YouTube: Blending Mass Communication Reception and Social Connection. *Journal of Broadcasting and Electronic Media*, 53(2), 317-335.
- Holmbom, M. (2015). *The YouTuber: A Qualitative Study of Popular Content Creators*. Umeå: Institutionen för informatik.
- Jacobsson, A., Hagberg, I. (2020). *Videon är i samarbete med...". Sundsvall: Mittuniversitetet*.
- Jimenez, A. G., Garcia, B. C., de Ayala, M. C. L. (2016). Adolescents and YouTube: Creation, Participation and Consumption. *Prisma social: revista de ciencias sociales*, 61-89.
- Kelsey, T. (2010). *Social Networking Spaces: From Facebook to Twitter and Everything in Between*. New York: Apress.
- Krauskopf, K., Hesse, F., Zahn, C. (2012). Leveraging the affordances of Youtube: The role of pedagogical knowledge and mental models of technology functions for lesson planning with technology. *Computer and Education*, 58(4), 1194-1206.
- Labaš, D., Marinčić, P. (2016). Mediji kao sredstvo zabave u očima djece. *MediaAnali*, 12(15), 1-32.
- Labaš, D., Marinčić, P. (2016). Mediji kao sredstvo zabave u očima djece. *Medianali*, 12(15), 1-32.
- Muchtar, N. et al (2018). Using Youtube as Unlimited Educational Video Resources In Teaching English Skills. *Journal on English Language Teaching and Learning, Linguistics and Literature*, 3(1), 1-9.
- Olasina, G. (2017). An evaluation of education values of Youtube videos for academic writing. *The African Journal of Information Systems*, 9(4), 232-261.
- Putnam, M., Rock, T. (2017). *Action Research: Using Strategic Inquiry to Improve Teaching and Learning*. Los Angeles: SAGE Publishing.
- Ramírez – Ochoa, M. I. (2016). Posibilidades del uso educativo de YouTube. *Ra Ximhai*, 12(6), 537-546.
- Snelson, C. (2011). Youtube Across the Disciplines: A Review of the Literature. *Merlot: Journal of Online Learning and Teaching*, 7(1), 159-169.

Statens medioråd/Švedsko vijeće za medije (2019.) *Ungar och medier*. Stockholm: Statens medioråd.

Sörensson, A. (2017). *Barn och produkt placering på Youtube*. Malmö: Malmö Högskola.

Tewfik, G.L., Work, A.N., Shulman, S.M. (2020). Objective validation of YouTube educational videos for the instruction of regional anesthesia nerve blocks: a novel approach. *BMC Anesthesiol* 20, 168. <https://doi.org/10.1186/s12871-020-01084-w>

Watkins, J., Wilkins, M. (2011). Using Youtube in the EFL Classroom. *Language Education in Asia*, 2(1), 113-119.

Zaidi, A. et al (2018). University Students' Perceptions of YouTube Usage in (ESL) Classrooms. *International Journal of Academic Research in Business and Social Sciences*, 8(1), 534-545.