

## THE RELATIONSHIP BETWEEN WEBSITE MANAGEMENT AND SEARCH ENGINE OPTIMISATION

*The main aim of the article is to explore if there is a synergy between proactive website management and better organic visibility of websites on Google, evidenced through their search engine optimisation (SEO) score. The analysis was conducted using 63 responses to an electronic survey completed in summer 2017 by Serbian cultural institutions of national importance. The dependent variable was the SEO score, whereas the independent variables were the existence of Google Analytics, the state of content freshness and social media activity. To examine the differences between the SEO score with respect to each independent variable, a t- test for independent samples was used. Higher SEO scores were recorded for websites that use web analytics, perform a weekly content update and use more than one social network, which combined contribute to the efforts to attract more online users, increase awareness of the institutional activities and strengthen its online brand visibility. Instead of using disparate online tools and channels in website management, the goal should be achieving synergy between web analytics, social media, content generation and SEO, which is contributing to the online value creation. The research findings can contribute to website managers for making better-informed decisions regarding their online strategies and resource allocation.*

**Keywords:** Website, Search Engine Optimisation, Web Analytics, Social Media, Management in Culture

---

\* Faculty of Media and Communications, Singidunum University, Belgrade, Serbia;  
natasa.krstic@fmk.edu.rs

## Introduction

With the reduction in cultural budgets and the growing competition in the recreational marketplace, art and cultural institutions are facing increasing pressure to attract wider audiences, increase visitation, commercial use of services and overall visibility<sup>1</sup>. This requires the identification of opportunities such as online channels, to improve institutional awareness and expand its capacities for visitation<sup>2</sup>. As a result, visits to the cultural institutions' websites have become increasingly popular, and in some cases, the number of online visitors is even exceeding the number of physical ones<sup>3</sup>. Virtual visits do not only compensate for the decline in physical visits, but also lead to better-prepared visitors<sup>4</sup>, or to the post-visit experience<sup>5</sup>. However, in less developed countries such as Serbia, management in arts and culture are not applied to their full potential, predominantly due to multiple tensions between artistic and managerial values, where website management is not an exception<sup>6</sup>. Websites are treated rather as a static channel for occasional dissemination of information about activities, with unclear organisational and functional managerial roles<sup>7</sup>. According to authors Skov and Ingwersen, the most common reasons for visiting the cultural institutions' websites belong to the motivational categories such as

- <sup>1</sup> Kotler, G. N.; Rentschler, R. (2003): *Creativity and interactivity: new ways to experience, market and manage museums*, paper presented at the 2003 Kenneth Myer lecture for the George Fairfax fellowship. Deakin University, Geelong
- <sup>2</sup> Pallas, J.; Economides A. A. (2008): Evaluation of art museums' websites worldwide, *Information Services & Use*, 28: 45-57.  
Hume, M.; Mills, M. (2011): Building the sustainable iMuseum: is the virtual museum leaving our museums virtually empty? *International Journal of Nonprofit and Voluntary Sector Marketing*, 16: 275-289.  
Skov, M.; Ingwersen, P. (2014): Museum Web search behaviour of special interest visitors, *Library & Information Science Research*, 36: 91-98.
- <sup>3</sup> Fantoni, S. F.; et al. (2012): Exploring the Relationship between Visitor Motivation and Engagement in Online Museum Audiences, paper presented in: *Museums and the Web 2012 proceedings*, San Diego, USA. [https://www.museumsandtheweb.com/mw2012/papers/exploring\\_the\\_relationship\\_between\\_visitor\\_mot](https://www.museumsandtheweb.com/mw2012/papers/exploring_the_relationship_between_visitor_mot) (30.12.2017)  
Kabassi, K. (2017): Review: Evaluating websites of museums: State of the art, *Journal of Cultural Heritage*, 24: 184-196.
- <sup>4</sup> Voorbij, H. (2010): The use of web statistics in cultural heritage institutions, *Performance Measurement and Metrics*, 11(3): 266-279.
- <sup>5</sup> Marty, F. P. (2007): Museum Websites and Museum Visitors: Before and After the Museum Visit, *Museum Management & Curatorship*, 22(4): 337-360.
- <sup>6</sup> Yeh, J-T., Lin C-L. (2005): Museum Marketing and Strategy: Directors' Perception and Belief, *Journal of the American Academy of Business*, 6(2): 279-284.
- <sup>7</sup> Chow, S. A.; et al. (2014): The Website design and Usability of US Academic and public libraries, Findings from a Nationwide Study, *Reference & User Services Quarterly*, 53(3): 253-265.

gathering information to plan an upcoming visit, self-motivated or assigned research for specific content information, engaging in casual browsing and for making a transaction on the website (online shop)<sup>8</sup>. Cultural institutions that rely on old-school website management will be the losers in the post-digital communications age, as those institutions who are proactive in the areas of search engine optimization (SEO), the use of social media and web analytics tools will see more people through their doors<sup>9</sup>. SEO is especially important having in mind that the visitors' online activity is mostly focused on searching for information (about artists/performers and events), the search engines being the most common method of active discovery, even across older age groups<sup>10</sup>.

Consequently, measuring only the number of physical visits provides an incomplete view of the total amount of use of the cultural institution and its resources. Thus, web analytics form a necessary complement to physical measures, even more so when physical visits are being replaced by web visits<sup>11</sup>. Web analytics provide simple statistics concerning the website, such as the number of visitors or sessions, the average number of page views per visitor, average page duration, most popular pages, bounce rates and referrers. Thus, it benefits from decentralised decision making, empowering website managers and IT administrators to create their own practices in monitoring and reporting about website performances<sup>12</sup>. Given the development of cultural institution services since the introduction of the internet, the measurement of unique visitors, time spent and interaction with the content will become an important part of their operations<sup>13</sup>. The most common analytical tool used today is Google Analytics, a free service offered by Google that generates detailed statistics about the visits to a website, telling the web manager how visitors found the site and how they interact with its content, allowing them to gain insight into how to improve the site's content and design<sup>14</sup>.

---

<sup>8</sup> Skov, M.; Ingwersen, P. (2014), 92.

<sup>9</sup> Arts Council England; et al. (2010): Digital audiences: engagement with arts and culture online, <http://webarchive.nationalarchives.gov.uk/20160204122036/http://www.arts council.org.uk/advice-and-guidance/browse-advice-and-guidance/digital-audiences-engagement-arts-and-culture-online> (17.08.2017).

<sup>10</sup> Ibid, 27.

<sup>11</sup> Voorbij, H.

<sup>12</sup> Lukić, J. (2014): The impact of information and communication technology on decision making process in the big data era<sup>9</sup>, *Megatrend revija*, 11(2): 221-234.

<sup>13</sup> Caldwell, N. (2005): The Whipple 'Time-clock' Experiment: Measurement of Visitor Engagement in a Small Museum, in AIMAC 2005 proceedings of the *8th International Conference on Arts and Cultural Management*, [http://neumann.hec.ca/aimac2005/PDF\\_Text/Caldwell\\_Nial.pdf](http://neumann.hec.ca/aimac2005/PDF_Text/Caldwell_Nial.pdf) (18.01.2018).

<sup>14</sup> Kaushik, A. (2009): *Web Analytics 2.0: The Art of Online Accountability and Science of Customer Centricity*, Wiley.

Another component of proactive website management is frequent update of fresh and relevant content. In that respect, “content freshness” is defined as the rate which points out how fast a search engine updates its caches, reflecting the time lag between the cached version and the real version of a web page as appeared on the web. It is calculated by averaging the differences between the time when the tests take place and the time when the web search engines had last updated their indexes<sup>15</sup>. Major search engines use fresh content in their ranking algorithms, seeing them as a factor in information quality which contributes to a steady link growth and improvement of engagement metrics such as shares<sup>16</sup>. In 2011, Google announced that an important change to its ranking algorithm would be to value content freshness designed to give users the most up-to-date results in web search<sup>17</sup>. Thus, unlike many other sectors, content generation should not be an issue for cultural institutions, given the amount of content at their disposal.

Referring to the social media usage in arts and culture Kidd identified the three organizing frames<sup>18</sup>: the Marketing Frame (promoting the “face” of a cultural institution), the Inclusivity Frame (related to the notions of real and online “community”) and the Collaborative Frame (promoting collaboration with the audience). The three most commonly adopted social media networks within the cultural sector are Facebook, Twitter and YouTube, whose aim is to promote the arts, to increase the audience involvement, to enable institutions to engage more efficiently in art advocacy, to provide arts education to the public and enable artistic collaboration, as well as to improve various management requests<sup>19</sup>. Thus, Padilla-Meléndez and Del Águila-Obra<sup>20</sup> found out that the combined effort of website presence and social media usage for cultural institutions is also contributing to their online value creation.

---

Plaza, B. (2011): Google Analytics for measuring website performance, *Tourism Management*, 32: 477-481.

<sup>15</sup> Anagnostopoulos, I.; et al. (2010): Estimating evolution of freshness in Internet cache directories under the capture–recapture methodology, *Computer Networks*, 54(5): 741-765.

<sup>16</sup> Shepard, C. (2016): *10 Illustrations of How Fresh Content May Influence Google Rankings*, Moz blog, <https://moz.com/blog/google-fresh-factor-new> (27.03.2018).

<sup>17</sup> Singhal, A. (2011): *Giving you fresher, more recent search results*, Google blog, <https://googleblog.blogspot.rs/2011/11/giving-you-fresher-more-recent-search.html> (20.02.2018).

<sup>18</sup> Kidd Jenny (2011): “Enacting engagement online: framing social media use for the museum”, *Information Technology & People*, 24(1), 66.

<sup>19</sup> Thomson, K.; et al. (2013): Arts organizations and digital technologies, *Pew Research Center's Internet & American Life Project*. [http://www.pewinternet.org/files/old-media/Files/Reports/2013/PIP\\_ArtsandTechnology\\_PDF.pdf](http://www.pewinternet.org/files/old-media/Files/Reports/2013/PIP_ArtsandTechnology_PDF.pdf) (1.02.2018).

<sup>20</sup> Padilla-Meléndez, A.; Del Águila-Obra, R. A. (2013): Web and social media usage by museums: Online value creation, *International Journal of Information Management*, 33(5): 892-898.

Bearing in mind limitations in cultural budget, both in Serbia and globally, the increase of web visits due of better optimized websites based on the natural search engine listings is considered as crucial to attract traffic to a website and therefore a desired strategy for managers of cultural institutions<sup>21</sup>. However, achieving high ranking is considered as difficult because search engines do not publicly release their ranking algorithms, nor disclose information regarding the factors used in ranking<sup>22</sup>. Google is said to employ more than 250 factors in its ranking algorithm, most of which are held as closely guarded secrets<sup>23</sup>. The process, as well as the activities, that website managers undertake to secure a top place on search engine result pages (SERP) is referred to as search engine optimization (SEO)<sup>24</sup>. One of the most important aspects of SEO is content creation, as it contributes to increased website traffic and number of external links treated as online recommendations. Thus, a website with regularly updated amounts of content invites more traffic to it and achieves a better search engine ranking position<sup>25</sup>. Finally, a growing technique for SEO is social media optimisation (SMO), which involves optimizing a site so that it becomes more visible in social media searches through generated engagement in terms of likes, shares and comments<sup>26</sup>. The relationship between websites and social media can be also examined vice versa - one of the indicators of the effective use of social media could be the number of webpages they refer to in their posts, contributing to website traffic from social channels<sup>27</sup>.

---

<sup>21</sup> Dickinson, Z.; Smit, M. (2015): Being where the people are: the challenges and benefits of search engine visibility for public libraries, *Library Hi Tech News*, 32(10): 11-15.

Scott, D. (2015): White Hat Search Engine Optimization (SEO): Structured Web Data for Libraries, *Partnership: the Canadian Journal of Library and Information Practice and Research*, 10(1): 1-22.

<sup>22</sup> Mavridis, T.; Symeonidis, L. A. (2015): Identifying valid search engine ranking factors in a Web 2.0 and Web 3.0 context for building efficient SEO mechanisms, *Engineering Applications of Artificial Intelligence*, 41: 75-91.

Luh C-J.; et al. (2016): Estimating Google's search engine ranking function from a search engine optimization perspective, *Online Information Review*, 40(2): 239.

<sup>23</sup> ibid

<sup>24</sup> Onaifo, D.; Rasmussen, D. (2013): Increasing libraries' content findability on the web with search engine optimization, *Library Hi Tech*, 31(1): 88.

<sup>25</sup> ibid, 104

<sup>26</sup> Suzić, B.; et al. (2016): Adoption of Social Media for Public Relations by Museums, *Central European Business Review*, 5(2): 5-16.

<sup>27</sup> Anderson, L. M. (2004): *Metrics of success in art museums*, Getty Leadership Institute

## 2. Methodology

The aim of the research was to explore if tracking of website visitors and traffic with analytics tool, the state of content freshness and the social media activity, as components of proactive website management, are affecting the website SEO score on Google. For that purpose, an electronic questionnaire was submitted to website managers of Serbian cultural institutions during summer of 2017. The starting sample consisted of 74 cultural institutions from the register of the Serbian Ministry of Culture, which included public libraries, archives and museums of national importance. A valid electronic survey was delivered by 63 institutions (28 national libraries, 15 national museums and 20 historical archives), whilst the remaining responses came from 11 institutions that do not have a website. Among them, more than a half of the surveyed participants is in charge of content contribution and its placement on the website, whereas one-third is responsible for social networks and/or public relations (PR).

For the purpose of the research, besides the institutions not owning a website all the responses with “I don’t know” were omitted, as they demonstrated lack of managerial knowledge about their websites. Thus, 40 institutions (or 64% of the primary data) remained for statistical analysis. Two survey sample questions (institutional name and website URL) and three close-end research questions for the examination of the proactive website management were stipulated, and coded as binary variables:

1. The use of web analytics tool - Google Analytics, for tracking and reporting on the website traffic, coded with 0 (non-use of Google Analytics) and 1 (use of Google Analytics);
2. The website content freshness, as an example of best SEO practice consisting of regular update of new and relevant content focusing on core pages (e.g. home page, category pages). Content freshness was valued with 1 (latest content was placed on the website last week) and 0 (content was placed last month/quarter/long time ago).
3. The social media activity, used to give cultural institutions a recognizable face on the internet, as an extension of their branding activity, and to disseminate a variety of information to the wider public<sup>28</sup>. Managing more than one social network was coded with 1, and 0 for using only Facebook, or without social media use.

In the second phase, the total SEO score of analysed websites was calculated and presented on a scale from 1-100, with 1-30 as deficient, 30-60 as good, 60-80 as very good, and over 80 as excellent performance.

<sup>28</sup> Kotler, G. N.; Rentschler, R.

Bountouri, L.; Giannakopoulos, G. (2014): The Use of Social Media in Archives, *Procedia - Social and Behavioural Sciences*, 147: 510-517.

To examine if there is a relationship between proactive website management and the SEO score of analysed websites, a t-test for independent samples was used. In that respect, the dependent variable was SEO score, whereas the independent variables were the usage of Google Analytics, the state of content freshness and the social media activity on multiple accounts. The research aim was to examine if the use of website analytics tool, regular content update and social media activity, as components of proactive website management, are contributing to the higher organic visibility of websites on search engines, evinced through better SEO score.

### 3. Results and Discussion

The SEO score for examined websites of Serbian cultural institutions, together with coded responses referring to the usage of Google Analytics, weekly ingestion of fresh content and managing more than one social media account, as indicators of proactive website management, are presented in Table 1. For the calculation of the SEO score, a popular SEO checker and website review tool Woorank<sup>29</sup> was used.

**Table 1:** *SEO score and components of website management for Serbian cultural institutions*

	Website address	SEO score	Google Analytics	Content freshness	Social media activity
1.	arhivzrenjanin.org.rs	35	0	0	0
2.	arhivja.org.rs	32	0	0	0
3.	biblioteka-sm.rs	44	0	0	0
4.	bibliotekaprokuplje.org.rs	33	0	0	0
5.	arhivkikinda.org.rs	28	0	0	0
6.	nbvrakic.org.rs	49	0	0	0
7.	arhivnis.co.rs	30	0	0	0
8.	arhivbc.rs	34	0	0	0
9.	subiblioteka.rs	35	0	1	0
10.	biblioteka-smederevo.org.rs	38	0	1	0
11.	vranjearhiv.com	32	0	1	0
12.	arhivyu.gov.rs	28	0	1	0
13.	bms.rs	37	0	1	0

<sup>29</sup> www.woorank.com

14.	arhivkraljevo.org.rs	50	0	1	0
15.	arhivzajecar.org.rs	54	0	1	0
16.	nbleskovac.org.rs	29	1	0	0
17.	mnmu.rs	40	1	0	0
18.	nbpi.org.rs	50	1	1	0
19.	arhiv-beograda.org	59	1	1	0
20.	biblioteka-uzice.rs	32	1	1	0
21.	nbss.rs	61	1	1	0
22.	arhivsabac.org.rs	30	0	0	1
23.	bibliotekaprokuplje.org.rs	33	0	1	1
24.	mpu.rs	39	0	1	1
25.	etnografskimuzej.rs	60	0	1	1
26.	muzejnt.rs	51	1	0	1
27.	bibliotekasabac.org.rs	54	1	1	1
28.	zrbiblio.rs	45	1	1	1
29.	jabooka.org.rs	49	1	1	1
30.	kv-biblio.org.rs	43	1	1	1
31.	nb.rs	51	1	1	1
32.	biblioso.org.rs	32	1	1	1
33.	mij.rs	67	1	1	1
34.	mpus.org.rs	61	1	1	1
35.	narodnimuzej.rs	56	1	1	1
36.	nbks.org.rs	56	1	1	1
37.	unilib.rs	59	1	1	1
38.	archives.org.rs	53	1	1	1
39.	muzejvojvodine.org.rs	49	1	1	1
40.	imus.org.rs	57	1	1	1

**Note:** SEO score calculated in November 2017.

Among the Serbian cultural institutions, we have recorded the insufficient awareness about the use of web analytics for tracking and reporting on the website traffic, as only one third of the respondents confirmed the usage of Google Analytics (30%)<sup>30</sup>. Next, the t-test for independent samples has shown

<sup>30</sup> For the rest of the cultural institutions, 42% doesn't deploy Google Analytics and 28% were not sure about it.

that there is a statistically significant difference in terms of the average value of the SEO score, in favor of those cultural institutions which are deploying Google Analytics ( $\rho = 0.0003$ ). Therefore, it could be concluded that institutions with higher SEO score are proactively using Google Analytics for tracking and reporting on website traffic, as presented in Table 2.

**Table 2:** *The relationship between SEO score and Google Analytics*

Variable	Average SEO score (M)	Standard deviation (SD)	Sample size
Google Analytics: use	50.2	10.3	N1=21
Google Analytics: non-use	37.9	9.2	N0=19

**Note:**  $t = 3.9551, df = 38, \rho = 0.0003, \text{standard error of difference} = 3.096^{31}$

Regarding the state of the content freshness, the Serbian cultural institutions from our survey showed the strong awareness about the importance of new content generation, as two third of them are performing regular content updates on a weekly basis (66%)<sup>32</sup>. For examining the relationship between SEO score and content freshness, the t-test has also presented a statistically significant difference in terms of the average value of the SEO score ( $\rho = 0.0022$ ) in favour of cultural institutions which are frequently updating their web content. Namely, institutions with weekly content update, have also a better SEO score (Table 3).

**Table 3:** *The relationship between SEO score and content freshness*

Variable	Average SEO score (M)	Standard deviation (SD)	Sample size
Content update: weekly	47.9	11.1	N1=28
Content update: monthly/quarterly/rare	36.3	7.9	N0=12

**Note:**  $t = 3.2807, df = 38, \rho = 0.0022, \text{standard error of difference} = 3.538$

Finally, the Serbian cultural institutions showed some intense activity on social networks. Namely, nearly a half of the institutions are present on more than one social network, a positive finding which speaks about their desire to be engaged towards visitors and showcases the visibility of their conducted activities. The t-test has also confirmed a statistically significant difference in terms of the average value of the SEO score ( $\rho = 0.0035$ ) in favour of cultural institutions which are active on more than one social network. Specifically,

<sup>31</sup> Calculation tool: <https://www.graphpad.com/quickcalcs/ttest1.cfm>

<sup>32</sup> For the rest of the cultural institutions; 10% last month, 9% last quarter and 15% long time ago.

institutions which manage more social networks have a higher SEO score (Table 4).

**Table 4:** *The relationship between SEO score and social media activity*

Variable	Average SEO score (M)	Standard deviation (SD)	Sample size
More than one social network	49.7	10.4	N1=19
Only Facebook/without social media use	39.5	10.3	N0=21

**Note:**  $t = 3.1103$ ,  $df = 38$ ,  $\rho = 0.0035$ , standard error of difference = 3.284

#### 4. Conclusions and limitations

This exploratory research was aimed toward examining the relationship between proactive website management and the phenomenon of SEO as a mechanism for improving website visibility and findability in organic search results. The research has shown that activities such as using analytic tools for monitoring website traffic, content generation and deploying more social media accounts, pots retroactive positive feedback on the website SEO score. Combined, they contribute to the efforts toward attracting more online users, increase awareness of the institutional activities and strengthen its online brand visibility.

Having in mind the discovered link between proactive website management and its SEO score, the research findings can contribute to website managers for making better informed decisions regarding their online strategies and resource allocation. Instead of using disparate online channels, the ultimate goal should become their mutual synergy, which would contribute to the online value creation.

The conducted research has certain limitations. The sample size is relatively small and the data collection for this study was limited only to Serbian cultural institutions of national importance, therefore, any extrapolation of the findings must be done with caution. Besides, this study relies on a software tool in gathering information about the SEO score for examined websites, and the data might become non-accurate given their fluid nature.

### Literature

- Anagnostopoulos Ioannis, Anagnostopoulos Christos, Vergados D. Dimitros (2010): “Estimating evolution of freshness in Internet cache directories under the capture–recapture methodology”, *Computer Networks*, 54, 5/2010, 741-765. doi: 10.1016/j.comnet.2009.09.020
- Anderson L. Maxwell (2004): *Metrics of success in art museums*, Getty Leadership Institute, Los Angeles, CA
- Arts Council England, MLA, Arts and Business (2010): “*Digital audiences: engagement with arts and culture online*”. <http://webarchive.nationalarchives.gov.uk/20160204122036/http://www.artscouncil.org.uk/advice-and-guidance/browse-advice-and-guidance/digital-audiences-engagement-arts-and-culture-online> (17.08.2017).
- Bountouri Lina, Giannakopoulos Georgios (2014): “The Use of Social Media in Archives”, *Procedia - Social and Behavioural Sciences*, 147/2014, 510-517. doi: 10.1016/j.sbspro.2014.07.146
- Caldwell Nial (2005): “The Whipple ‘Time-clock’ Experiment: Measurement of Visitor Engagement in a Small Museum”, in *AIMAC 2005 proceedings of the 8th International Conference on Arts and Cultural Management July 3-6, 2005*, Montréal, Canada. [http://neumann.hec.ca/aimac2005/PDF\\_Text/Caldwell\\_Nial.pdf](http://neumann.hec.ca/aimac2005/PDF_Text/Caldwell_Nial.pdf) (18.01.2018).
- Chow S. Anthony, Bridges Michelle, Commander Patricia (2014): “The Website design and Usability of US Academic and public libraries, Findings from a Nationwide Study”, *Reference & User Services Quarterly*, 53, 3/2014, 253–265. doi: <http://dx.doi.org/10.5860/rusq.53n3.253>
- Dickinson Zoe, Smit Mike (2015): “Being where the people are: the challenges and benefits of search engine visibility for public libraries”, *Library Hi Tech News*, 32, 10/2015, 11-15. <https://doi.org/10.1108/LHTN-08-2015-0055>
- Fantoni Silvia Filippini, Stein Rob, Bowman Gray (2012): “Exploring the Relationship between Visitor Motivation and Engagement in Online Museum Audiences”, paper presented in *Museums and the Web 2012 proceedings*, San Diego, USA. [https://www.museumsandtheweb.com/mw2012/papers/exploring\\_the\\_relationship\\_between\\_visitor\\_mot](https://www.museumsandtheweb.com/mw2012/papers/exploring_the_relationship_between_visitor_mot) (30.12.2017).
- Hume Margee, Mills Michael (2011): “Building the sustainable iMuseum: is the virtual museum leaving our museums virtually empty?”, *International Journal of Nonprofit and Voluntary Sector Marketing*, 16/2011, 275-289. doi: 10.1002/nvsm.425
- Kabassi Katerina (2017): “Review: Evaluating websites of museums: State of the art”, *Journal of Cultural Heritage*, 24/2017, 184-196. doi: 10.1016/j.culher.2016.10.016
- Kaushik Avinash (2009): *Web Analytics 2.0: The Art of Online Accountability and Science of Customer Centricity*. Wiley, New Jersey, United States.

- Kelly Lynda (2009): “The Impact of Social Media on Museum Practice”, paper presented at the National Palace Museum, Taipei. [https://www.researchgate.net/publication/255656456\\_THE\\_IMPACT\\_OF\\_SOCIAL\\_MEDIA\\_ON\\_MUSEUM\\_PRACTICE](https://www.researchgate.net/publication/255656456_THE_IMPACT_OF_SOCIAL_MEDIA_ON_MUSEUM_PRACTICE) (30.03.2018).
- Kidd Jenny (2011): “Enacting engagement online: framing social media use for the museum”, *Information Technology & People*, 24, 1/2011, 64-77. doi: 10.1108/09593841111109422.
- Kotler G. Neil, Rentschler Ruth (2003): “*Creativity and interactivity: new ways to experience, market and manage museums*”, paper presented at the 2003 Kenneth Myer lecture for the George Fairfax fellowship. Deakin University, Geelong.
- Luh Cheng-Jye, Yang Sheng-An, Huang Ting-Li Dean (2016): “Estimating Google’s search engine ranking function from a search engine optimization perspective”, *Online Information Review*, 40, 2/2016, 239-255. doi: 10.1108/OIR-04-2015-0112.
- Lukić Jelena (2014): “The impact of information and communication technology on decision making process in the big data era”, *Megatrend revija*, 11, 2/2014, 221-234.
- Marty F. Paul (2007): “Museum Websites and Museum Visitors: Before and After the Museum Visit”, *Museum Management & Curatorship*, 22, 4/2007, 337-360. doi:10.1080/09647770701757708.
- Mavridis Themistoklis, Symeonidis L. Andreas (2015): “Identifying valid search engine ranking factors in a Web 2.0 and Web 3.0 context for building efficient SEO mechanisms”, *Engineering Applications of Artificial Intelligence*, 41/2015, 75–91. doi: 10.1016/j.engappai.2015.02.002
- Onaifo Daniel, Rasmussen Diane (2013): “Increasing libraries’ content findability on the web with search engine optimization”, *Library Hi Tech*, 31, 1/2013, 87-108. <https://doi.org/10.1108/07378831311303958>
- Padilla-Meléndez Antonio, Del Águila-Obra R. Ana (2013): “Web and social media usage by museums: Online value creation”, *International Journal of Information Management*, 33, 5/2013, 892-898. doi: 10.1016/j.ijinfomgt.2013.07.004
- Pallas John, Economides A. Anastasios (2008): “Evaluation of art museums’ websites worldwide”, *Information Services & Use*, 28/2008, 45–57. doi: 10.3233/ISU-2008-0554
- Plaza Beatriz (2011): “Google Analytics for measuring website performance”, *Tourism Management*, 32/2011, 477-481. doi:10.1016/j.tourman.2010.03.015
- Scott Dan (2015): “White Hat Search Engine Optimization (SEO): Structured Web Data for Libraries”, *Partnership: the Canadian Journal of Library and Information Practice and Research*, 10, 1/2015, 1-22. doi: <http://dx.doi.org/10.21083/partnership.v10i1.3328>

- Shepard Cyrus (2016): “10 Illustrations of How Fresh Content May Influence Google Rankings”, Moz blog. <https://moz.com/blog/google-fresh-factor-new> (27.03.2018).
- Singhal Amit (2011): “Giving you fresher, more recent search results”, Google blog. <https://googleblog.blogspot.rs/2011/11/giving-you-fresher-more-recent-search.html> (20.02.2018).
- Skov Mette, Ingwersen Peter (2014): “Museum Web search behaviour of special interest visitors”, *Library & Information Science Research*, 36/2014, 91-98. doi:10.1016/j.lisr.2013.11.004
- Suzić Bojana, Karliček Miroslav, Stríteský Václav (2016): “Adoption of Social Media for Public Relations by Museums”, *Central European Business Review*, 5, 2/2016, 5-16.
- Thomson Kristin, Purcell Kristen, Rainie Lee (2013): “Arts organizations and digital technologies”, *Pew Research Center’s Internet & American Life Project*. [http://www.pewinternet.org/files/old-media/Files/Reports/2013/PIP\\_ArtsandTechnology\\_PDF.pdf](http://www.pewinternet.org/files/old-media/Files/Reports/2013/PIP_ArtsandTechnology_PDF.pdf) (1.02.2018).
- Voorbij Henk (2010): “The use of web statistics in cultural heritage institutions”, *Performance Measurement and Metrics*, 11, 3/2010, 266-279. doi: 10.1108/14678041011098541
- Yeh Jin-Tsann, Lin Chyong-Ling (2005): “Museum Marketing and Strategy: Directors’ Perception and Belief”, *Journal of the American Academy of Business*, 6, 2/2005, 279–284.
- Prof. dr Nataša Krstić, vanredni profesor
- *Fakultet za medije i komunikacije, Singidunum Univerzitet, Beograd*

Originalni naučni rad

Primljen 19.5.2018.

Odobren 6.10.2018.

## OSNOS IZMEĐU UPRAVLJANJA VEB SAJATOM I PROCESA OPTIMIZACIJE NA PRETRAŽIVAČU

*Osnovni cilj članka je da se istraži da li postoji sinergija između proaktivnog upravljanja veb sajtom i boljoj organskoj vidljivosti veb sajtova na Gugl pretraživaču koja se ogleda kroz ostvareni rezultat u optimizaciji na internet pretraživačima (SEO). Analiza je sprovedena na osnovu 63 odgovora na elektronski upitnik sproveden tokom leta 2017. godine u kojem su učestvovalе srpske ustanove kulture nacionalnog značaja. Kao zavisna varijabla koristio se ostvareni rezultat u optimizaciji veb sajta na pretraživaču, dok su nezavisne varijable bile korišćenje Gugl analitike, proaktivan unos novog veb sadržaja i aktivnosti na društvenim mrežama. Da bi se ispitalе razlike između ostvarenog rezultata u optimizaciji veb sajta na pretraživaču u odnosu na pojedinačne nezavisne varijable, korišćen je t-test za nezavisne uzorke. Bolje rezultate u optimizaciji zabeležili su veb sajtovi koji koriste Gugl analitiku, nedeljno unose novi veb sadržaj i koriste više od jedne društvene mreže, koji kombinovano doprinose ciljevima privlačenja novih korisnika putem internet kanala, povećavaju svest o aktivnostima ustanove i jačaju vidljivost njenog brenda na internetu. Umesto korišćenja disperitetnih alatki i kanala u upravljanju veb sajtom, cilj treba da bude osvarenje uzajamne sinergije između veb analitike, društvenih mreža, generisanja sadržaja i optimizacije sajta na pretraživaču, koji dovode do stvaranja onlajn vrednosti. Nalazi istraživanja mogu koristiti menadžerima veb sajtova za donošenje bolje informisanih odluka vezano za strategiju nastupa na internetu i alokaciju resursa.*

**Ključne reči:** Veb sajt, optimizacija veb sajta na pretraživaču, veb analitika, društvene mreže, menadžment u kulturi.